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THE
NAUTICAL ALMANAC

AND
ASTRONOMICAL EPHEMERIS

FOR THE YEAR

1924

FOR THE MERIDIAN

OF THE

ROYAL OBSERVATORY AT GREENWICH.

(WITH TWO INSET ECLIPSE MAPS.)

PUBLISHED BY ORDER OF
THE LORDS COMMISSIONERS OF THE ADMIRALTY.

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MCMXXI.

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ALPHABETICALLY ARRANGED.

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ECLIPSE MAPS.

To face page 462. Map of the Partial Eclipse of the Sun, March 5, 1924.

To face page 467. Map of the Partial Eclipse of the Sun, August 29, 1924.

P R E F A C E.

THE contents and the arrangement of the NAUTICAL ALMANAC for the year 1924 are the same generally as those of the preceding year.

The following sections have been supplied from abroad :—

Apparent Places of Polar Stars from Paris.

Apparent Places of Stars marked A. N. or A. E. at the foot of the column from San Fernando and Washington respectively.

Eclipses from Washington and Paris.

Elements of Occultations from Washington.

Jupiter's Fifth Satellite from Washington ; Jupiter's four principal Satellites from Paris ; Saturn's Satellites and Rings from Washington ; Satellites of Uranus and Neptune from Washington ; Transit of Mercury from Washington.

Physical Ephemerides of Sun, Moon (defective illumination excepted), Mercury, Venus, Mars, and Jupiter from Washington.

The places of the Sun are from NEWCOMB'S TABLES (*Astronomical Papers of the American Ephemeris and Nautical Almanac*, vol. vi., part i.).

The places of the Moon are from BROWN'S *Tables of the Motion of the Moon*.

The heliocentric places of the planets are from the Tables in the *Astronomical Papers of the American Ephemeris and Nautical Almanac*.

The mean places and proper motions and precessions of the Standard Stars have ordinarily been supplied by the office furnishing the apparent places. For the 83 stars whose apparent places have been calculated in this office, mean places and proper motions have been derived from NEWCOMB'S Catalogue of Fundamental Stars (*Astronomical Papers of the American Ephemeris and Nautical Almanac*, vol. viii., part ii.). The names of the stars have in all cases been taken from this Catalogue.

The stellar magnitudes have been taken, with a few exceptions, from *Revised Harvard Photometry*. The magnitude of the variable star ϵ Aurigæ has been taken from "A Second Catalogue of Variable Stars" (*Harvard Annals*, vol. lv.), and that of the star α Orionis as variable between the limits 0.3 and 1.1. The spectral types have been taken from a manuscript list forwarded by Professor Pickering in 1916.

Since the date of the Preface of the last Almanac, no changes of staff have occurred.

The staff at present consists of:—

Chief Assistant.—Bernard Francis Bawtree.

Assistants.—John Abner Sprigge, William Fraser Doak, M.A. (Glas.), F.R.A.S., F.R.G.S., Thomas Charlton Hudson, B.A. (Cantab.), F.R.A.S.

P. H. COWELL,
Superintendent.

H.M. Nautical Almanac Office,
86 Lee Road, London, S.E. 3.
Sept. 5, 1921.

EXPLANATION OF ASTRONOMICAL SYMBOLS AND ABBREVIATIONS.

☉	The Sun.	♂	Mars.	♄	Conjunction.
☾	The Moon.	♃	Jupiter.	☐	Quadrature.
☿	Mercury.	♄	Saturn.	♌	Opposition.
♀	Venus.	♅	Uranus.	♊	Ascending Node.
☾ or ♂	The Earth.	♆	Neptune.	♋	Descending Node.

^h	Hours.	°	Degrees.	N.	North.	S.	South.
^m	Minutes of Time.	'	Minutes of Arc.	E.	East.	W.	West.
^s	Seconds of Time.	"	Seconds of Arc.				

SIGNS OF THE ZODIAC.

♈	Aries	-	-	0°	IV. ♌	Leo	-	-	120°	VIII. ♐	Sagittarius	240°
♉	Taurus	-	-	30	V. ♍	Virgo	-	-	150	IX. ♑	Capricornus	270
♊	Gemini	-	-	60	VI. ♎	Libra	-	-	180	X. ♒	Aquarius	300
♋	Cancer	-	-	90	VII. ♏	Scorpio	-	-	210	XI. ♐	Pisces	330

PRINCIPAL ARTICLES OF THE CALENDAR,
For the Year 1924.

Golden Number	- - - - -	6	||	Dominical Letters	- - - - -	F, E
Epact	- - - - -	24	||	Julian Period (Year of)	- - - - -	6637

FIXED AND MOVABLE FESTIVALS, ANNIVERSARIES,
&c. &c.

Epiphany	- - - - -	Jan.	6	||	<i>Rogation Sunday</i>	- - -	May	25
<i>Septuagesima Sunday</i>	- - - - -	Feb.	17	||	Birthday of Queen Mary	- - -		26
St. David	- - - - -	Mar.	1	||	<i>Ascension Day—Holy Thursday</i>	- - -		29
<i>Quinquagesima—Shrove Sunday</i>	- - - - -		2	||	Birthday of King George V.	- June		3
<i>Ash Wednesday</i>	- - - - -		5	||	<i>Whit Sunday</i>	- - - - -		8
<i>Quadragesima—1st Sun. in Lent</i>	- - - - -		9	||	<i>Trinity Sunday</i>	- - - - -		15
St. Patrick	- - - - -		17	||	<i>Corpus Christi</i>	- - - - -		19
Annunciation—Lady Day	- - - - -		25	||	Birthday of the Prince of Wales	- - -		23
<i>Palm Sunday</i>	- - - - -	April	13	||	St. John Bapt.—Midsum. Day	- - -		24
<i>Good Friday</i>	- - - - -		18	||	St. Michael—Michaelmas Day	Sept.		29
<i>EASTER DAY</i>	- - - - -		20	||	<i>1st Sunday in Advent</i>	- - Nov.		30
St. George	- - - - -		23	||	St. Andrew	- - - - -		30
<i>Low Sunday</i>	- - - - -		27	||	Birthday of Queen Alexandra	Dec.		1
Accession of King George V.	- May		6	||	St. Thomas	- - - - -		21
Proclamation of King George V.			9	||	Christmas Day	- - - - -		25

The Year 5685 of the Jewish Era begins on September 29.
The Year 1343 of the Mohammedan Era begins on August 2.
Ramadân (Month of Abstinence observed by the Turks) begins on April 6.

ERRATA.

(Continued from p. ix of the Nautical Almanac for 1923.)

ABRIDGED NAUTICAL ALMANAC FOR THE YEAR 1923.

Page 153. (Declination of α Cygni.) *For* 44° *read* 45° .

NAUTICAL ALMANAC FOR THE YEAR 1924.

Page 17. (Moon's Longitude at Midnight on Feb. 2.) *For* $286^{\circ} 2' 26''.8$ *read*
 $286^{\circ} 2' 25''.8$.

Mean Noon.	Nutation in R.A. (in time).	The Sun's			The Moon's		
		Horizontal Parallax.	Aberration.	Mean Longitude.	Mean Longitude.	Mean Longitude Ascending Node.	Mean Longitude Perigee.
	^s	[°]	[°]	[°]	[°]	[°]	[°]
Jan. 1	— 0.43	8.95	20.82	279.8812	214.7304	154.9893	230.8971
11	— 0.41	8.95	20.82	289.7377	346.4944	154.4598	232.0112
21	— 0.40	8.94	20.80	299.5942	118.2584	153.9302	233.1252
31	— 0.40	8.93	20.78	309.4507	250.0223	153.4007	234.2392
Feb. 10	— 0.41	8.92	20.74	319.3071	21.7863	152.8712	235.3533
20	— 0.43	8.90	20.70	329.1636	153.5503	152.3416	236.4673
Mar. 1	— 0.45	8.88	20.65	339.0201	285.3142	151.8121	237.5813
11	— 0.48	8.86	20.60	348.8765	57.0782	151.2825	238.6954
21	— 0.52	8.83	20.54	358.7330	188.8422	150.7530	239.8094
31	— 0.55	8.81	20.48	8.5895	320.6061	150.2235	240.9235
Apr. 10	— 0.59	8.78	20.42	18.4460	92.3701	149.6939	242.0375
20	— 0.61	8.76	20.37	28.3024	224.1341	149.1644	243.1515
30	— 0.63	8.73	20.31	38.1589	355.8980	148.6348	244.2656
May 10	— 0.64	8.71	20.26	48.0154	127.6620	148.1053	245.3796
20	— 0.64	8.69	20.22	57.8719	259.4260	147.5758	246.4937
30	— 0.63	8.68	20.19	67.7283	31.1900	147.0462	247.6077
June 9	— 0.62	8.67	20.16	77.5848	162.9539	146.5167	248.7218
19	— 0.60	8.66	20.14	87.4413	294.7179	145.9872	249.8358
29	— 0.59	8.65	20.13	97.2978	66.4819	145.4576	250.9498
July 9	— 0.58	8.66	20.13	107.1542	198.2458	144.9281	252.0639
19	— 0.57	8.66	20.14	117.0107	330.0098	144.3985	253.1779
29	— 0.56	8.67	20.16	126.8672	101.7738	143.8690	254.2920
Aug. 8	— 0.57	8.68	20.19	136.7237	233.5377	143.3395	255.4060
18	— 0.58	8.70	20.23	146.5801	5.3017	142.8099	256.5200
28	— 0.60	8.71	20.27	156.4366	137.0657	142.2804	257.6341
Sept. 7	— 0.63	8.74	20.32	166.2931	268.8296	141.7508	258.7481
17	— 0.67	8.76	20.37	176.1495	40.5936	141.2213	259.8622
27	— 0.70	8.78	20.43	186.0060	172.3576	140.6918	260.9762
Oct. 7	— 0.73	8.81	20.49	195.8625	304.1215	140.1622	262.0903
17	— 0.76	8.83	20.55	205.7190	75.8855	139.6327	263.2043
27	— 0.78	8.86	20.60	215.5754	207.6495	139.1031	264.3183
Nov. 6	— 0.80	8.88	20.66	225.4319	339.4134	138.5736	265.4323
16	— 0.80	8.90	20.71	235.2884	111.1774	138.0441	266.5464
26	— 0.79	8.92	20.75	245.1449	242.9414	137.5145	267.6604
Dec. 6	— 0.78	8.93	20.78	255.0013	14.7053	136.9850	268.7745
16	— 0.76	8.94	20.80	264.8578	146.4693	136.4554	269.8885
26	— 0.73	8.95	20.82	274.7143	278.2333	135.9259	271.0025
36	— 0.71	8.95	20.82	284.5708	49.9972	135.3964	272.1166

Daily Motion.			
Mean Obliquity, 1924.0	— 23° 26' 57".02	+	+
Precession for the Year 1924	— 50".2619	+	—
Precession for 1 Day	— 0".1376	0".98565	13".17640
		0".05295	0".11140

AT APPARENT NOON.

Date.	THE SUN'S				Sidereal Time of the Semi- diameter passing the Meridian.*	Equation of Time, to be added to Apparent Time.	Var. in hour.
	Apparent Right Ascension.	Var. in hour.	Apparent Declination.	Var. in hour.			
	h m s	s	° ' "	"	m s	m s	s
Tues.	1 18 42 42.74	11.056	S. 23 5 0.1	11 28	1 11.06	3 12.51	1.196
Wed.	2 18 47 7.96	11.044	23 0 15.5	12 43	1 11.02	3 41.09	1.185
Thur.	3 18 51 32.87	11.030	22 55 3.4	13 58	1 10.97	4 9.37	1.171
Frid.	4 18 55 57.41	11.016	22 49 23.8	14.72	1 10.92	4 37.31	1.156
Sat.	5 19 0 21.64	11.000	22 43 17.0	15.85	1 10.87	5 4.87	1.140
Sun.	6 19 4 45.43	10.982	22 36 43.2	16.97	1 10.81	5 32.03	1.122
Mon.	7 19 9 8.77	10.963	22 29 42.5	18.09	1 10.75	5 58.74	1.103
Tues.	8 19 13 31.64	10.942	22 22 15.1	19 19	1 10.68	6 24.98	1.083
Wed.	9 19 17 54.00	10.920	22 14 21.4	20.29	1 10.61	6 50.71	1.061
Thur.	10 19 22 15.82	10.897	22 6 1.4	21.37	1 10.54	7 15.91	1.038
Frid.	11 19 26 37.08	10.873	21 57 15.5	22 45	1 10.47	7 40.54	1.014
Sat.	12 19 30 57.74	10.848	21 48 4.0	23 51	1 10.39	8 4.58	0.989
Sun.	13 19 35 17.79	10.822	21 38 27.0	24 56	1 10.30	8 28.01	0.963
Mon.	14 19 39 37.20	10.795	21 28 24.9	25 61	1 10.22	8 50.80	0.936
Tues.	15 19 43 55.95	10.767	21 17 57.9	26.64	1 10.13	9 12.93	0.908
Wed.	16 19 48 14.02	10.739	21 7 6.4	27 65	1 10.04	9 34.39	0.880
Thur.	17 19 52 31.40	10.709	20 55 50.7	28 65	1 9.95	9 55.16	0.850
Frid.	18 19 56 48.07	10.679	20 44 11.0	29 65	1 9.85	10 15.21	0.821
Sat.	19 20 1 4.01	10.649	20 32 7.7	30 62	1 9.75	10 34.55	0.790
Sun.	20 20 5 19.22	10.618	20 19 41.2	31 58	1 9.65	10 53.15	0.759
Mon.	21 20 9 33.68	10.587	20 6 51.7	32 53	1 9.55	11 11.00	0.728
Tues.	22 20 13 47.38	10.555	19 53 39.6	33.47	1 9.45	11 28.10	0.697
Wed.	23 20 18 0.31	10.523	19 40 5.3	34 39	1 9.34	11 44.44	0.665
Thur.	24 20 22 12.48	10.491	19 26 9.1	35.29	1 9.23	12 0.01	0.632
Frid.	25 20 26 23.87	10.458	19 11 51.3	36 18	1 9.12	12 14.80	0.600
Sat.	26 20 30 34.48	10.426	18 57 12.3	37 06	1 9.01	12 28.81	0.568
Sun.	27 20 34 44.31	10.393	18 42 12.6	37 91	1 8.91	12 42.05	0.535
Mon.	28 20 38 53.34	10.360	18 26 52.4	38 76	1 8.79	12 54.50	0.502
Tues.	29 20 43 1.58	10.327	18 11 12.1	39 59	1 8.67	13 6.15	0.469
Wed.	30 20 47 9.03	10.294	17 55 12.2	40.40	1 8.56	13 17.01	0.436
Thur.	31 20 51 15.68	10.260	17 38 53.1	41.19	1 8.45	13 27.08	0.403
Frid.	32 20 55 21.53	10.227	S. 17 22 15.1	41.97	1 8.33	13 36.35	0.369

* Mean Time of the Semidiameter passing may be found by subtracting 0^s.19 from the *Sidereal Time*.

AT MEAN NOON.

		THE SUN'S			Equation of Time, to be added to Apparent Time.	Sidereal Time.
		Apparent Right Ascension.	Apparent Declination.	Semi- diameter.*		
Date.						
		h m s	S. ° ' "	16 17 56	m s	h m s
Tues.	1	18 42 42.15	S. 23 5 0.7	16 17.56	3 12.45	18 39 29.70
Wed.	2	18 47 7.28	23 0 16.3	16 17.56	3 41.02	18 43 26.26
Thur.	3	18 51 32.10	22 55 4.3	16 17.56	4 9.29	18 47 22.82
Frid.	4	18 55 56.59	22 49 24.9	16 17.55	4 37.22	18 51 19.37
Sat.	5	19 0 20.71	22 43 18.3	16 17.54	5 4.78	18 55 15.93
Sun.	6	19 4 44.41	22 36 44.7	16 17.52	5 31.93	18 59 12.49
Mon.	7	19 9 7.68	22 29 44.3	16 17.50	5 58.63	19 3 9.05
Tues.	8	19 13 30.47	22 22 17.2	16 17.48	6 24.87	19 7 5.60
Wed.	9	19 17 52.75	22 14 23.7	16 17.45	6 50.59	19 11 2.16
Thur.	10	19 22 14.50	22 6 4.0	16 17.42	7 15.79	19 14 58.72
Frid.	11	19 26 35.69	21 57 18.4	16 17.39	7 40.41	19 18 55.27
Sat.	12	19 30 56.28	21 48 7.1	16 17.35	8 4.45	19 22 51.83
Sun.	13	19 35 16.26	21 38 30.5	16 17.31	8 27.87	19 26 48.39
Mon.	14	19 39 35.60	21 28 28.7	16 17.26	8 50.66	19 30 44.94
Tues.	15	19 43 54.29	21 18 2.0	16 17.21	9 12.79	19 34 41.50
Wed.	16	19 48 12.31	21 7 10.8	16 17.15	9 34.25	19 38 38.06
Thur.	17	19 52 29.63	20 55 55.4	16 17.08	9 55.02	19 42 34.61
Frid.	18	19 56 46.24	20 44 16.1	16 17.01	10 15.07	19 46 31.17
Sat.	19	20 1 2.13	20 32 13.1	16 16.94	10 34.41	19 50 27.72
Sun.	20	20 5 17.29	20 19 46.9	16 16.85	10 53.01	19 54 24.28
Mon.	21	20 9 31.70	20 6 57.8	16 16.77	11 10.87	19 58 20.84
Tues.	22	20 13 45.36	19 53 46.0	16 16.67	11 27.97	20 2 17.39
Wed.	23	20 17 58.26	19 40 12.0	16 16.57	11 44.31	20 6 13.95
Thur.	24	20 22 10.38	19 26 16.1	16 16.47	11 59.88	20 10 10.50
Frid.	25	20 26 21.74	19 11 58.7	16 16.36	12 14.68	20 14 7.06
Sat.	26	20 30 32.31	18 57 20.0	16 16.24	12 28.70	20 18 3.62
Sun.	27	20 34 42.11	18 42 20.6	16 16.11	12 41.94	20 22 0.17
Mon.	28	20 38 51.11	18 27 0.7	16 15.98	12 54.39	20 25 56.73
Tues.	29	20 42 59.33	18 11 20.8	16 15.85	13 6.05	20 29 53.28
Wed.	30	20 47 6.76	17 55 21.2	16 15.71	13 16.92	20 33 49.84
Thur.	31	20 51 13.38	17 39 2.3	16 15.57	13 26.99	20 37 46.39
Frid.	32	20 55 19.21	S. 17 22 24.6	16 15.43	13 36.26	20 41 42.95

* The Semidiameter for *Apparent* Noon may be assumed the same as that for *Mean* Noon.

MEAN TIME.

Day.	THE SUN'S <i>Apparent</i>		Logarithm of the Radius Vector of the Earth.	Transit of the First Point of Aries.	THE MOON'S			
	Longitude.	Latitude.			Semidiameter.		Horizontal Parallax.	
	Noon.	Noon.			Noon.	Midnight.	Noon.	Midnight.
				^h ^m ^s				
1	279° 48' 43".4	N. 0° 58'	9.9926626	5 19 37.79	16 13.70	16 17.73	59 33.61	59 48.42
2	280 49 54.0	0.64	.9926624	5 15 41.88	16 21.26	16 24.15	60 1.35	60 11.97
3	281 51 4.9	0.67	.9926641	5 11 45.97	16 26.29	16 27.58	60 19.83	60 24.56
4	282 52 16.0	0.66	9.9926675	5 7 50.06	16 27.93	16 27.28	60 25.84	60 23.46
5	283 53 27.2	0.62	.9926727	5 3 54.14	16 25.60	16 22.91	60 17.31	60 7.42
6	284 54 38.5	0.56	.9926794	4 59 58.23	16 19.24	16 14.68	59 53.96	59 37.22
7	285 55 49.6	0.45	9.9926877	4 56 2.32	16 9.33	16 3.32	59 17.58	58 55.53
8	286 57 0.4	0.32	.9926976	4 52 6.41	15 56.81	15 49.94	58 31.62	58 6.43
9	287 58 11.0	0.19	.9927092	4 48 10.50	15 42.89	15 35.80	57 40.54	57 14.52
10	288 59 21.1	N. 0.07	9.9927226	4 44 14.59	15 28.82	15 22.08	56 48.90	56 24.16
11	290 0 30.7	S. 0.05	.9927378	4 40 18.68	15 15.70	15 9.77	56 0.74	55 38.99
12	291 1 39.7	0.17	.9927551	4 36 22.77	15 4.39	14 59.60	55 19.23	55 1.67
13	292 2 48.1	0.27	9.9927744	4 32 26.86	14 55.47	14 52.03	54 46.52	54 33.89
14	293 3 55.8	0.35	.9927959	4 28 30.95	14 49.30	14 47.29	54 23.86	54 16.46
15	294 5 2.8	0.40	.9928197	4 24 35.04	14 45.98	14 45.38	54 11.68	54 9.47
16	295 6 9.2	0.43	9.9928458	4 20 39.13	14 45.45	14 46.18	54 9.74	54 12.39
17	296 7 14.7	0.44	.9928744	4 16 43.22	14 47.50	14 49.39	54 17.26	54 24.19
18	297 8 19.6	0.42	.9929055	4 12 47.30	14 51.79	14 54.64	54 32.99	54 43.45
19	298 9 23.7	0.37	9.9929392	4 8 51.39	14 57.88	15 1.45	54 55.34	55 8.44
20	299 10 27.0	0.30	.9929756	4 4 55.48	15 5.28	15 9.30	55 22.50	55 37.28
21	300 11 29.6	0.20	.9930146	4 0 59.57	15 13.47	15 17.70	55 52.55	56 8.09
22	301 12 31.5	S. 0.08	9.9930564	3 57 3.66	15 21.95	15 26.17	56 23.69	56 39.19
23	302 13 32.7	N. 0.05	.9931009	3 53 7.75	15 30.33	15 34.37	56 54.42	57 9.26
24	303 14 33.2	0.19	.9931481	3 49 11.84	15 38.28	15 42.03	57 23.61	57 37.39
25	304 15 33.0	0.33	9.9931979	3 45 15.93	15 45.63	15 49.05	57 50.59	58 3.15
26	305 16 32.3	0.46	.9932503	3 41 20.02	15 52.30	15 55.38	58 15.08	58 26.37
27	306 17 30.9	0.58	.9933051	3 37 24.12	15 58.27	16 0.98	58 37.00	58 46.94
28	307 18 28.9	0.67	9.9933622	3 33 28.21	16 3.49	16 5.78	58 56.15	59 4.56
29	308 19 26.3	0.73	.9934214	3 29 32.30	16 7.83	16 9.60	59 12.08	59 18.56
30	309 20 23.0	0.76	.9934826	3 25 36.39	16 11.04	16 12.10	59 23.85	59 27.75
31	310 21 19.1	0.75	.9935456	3 21 40.48	16 12.74	16 12.89	59 30.09	59 30.64
32	311 22 14.4	N. 0.72	9.9936102	3 17 44.57	16 12.50	16 11.53	59 29.22	59 25.67

MEAN TIME.

THE MOON'S								
Day.	Longitude.		Latitude.		Age.	Meridian Passage.		
	Noon.	Midnight.	Noon.	Midnight.	Noon.	Upper.	Lower.	
					d	h	m	h m
1	210° 57' 55.4	218° 9' 49.1	N. 4° 18' 6.1	N. 4° 36' 46.7	24.44	20	5.5	7 38.3
2	225 25 44.6	232 45 10.4	4 51 11.1	5 0 57.4	25.44	21	2.0	8 33.4
3	240 7 25.7	247 31 41.0	5 5 49.0	5 5 35.8	26.44	22	0.9	9 31.2
4	254 56 59.7	262 22 19.6	5 0 14.5	4 49 49.8	27.44	23	1.4	10 31.1
5	269 46 35.9	277 8 44.1	4 34 33.8	4 14 46.7	28.44	*	*	11 31.8
6	284 27 42.1	291 42 33.5	3 50 54.7	3 23 29.6	29.44	0	1.9	12 31.6
7	298 52 29.5	305 56 50.4	2 53 6.8	2 20 23.9	0.97	1	0.7	13 29.1
8	312 55 6.7	319 46 59.6	1 45 59.2	N. 1 10 29.8	1.97	1	56.6	14 23.3
9	326 32 20.5	333 11 10.4	N. 0 34 31.4	S. 0 1 23.3	2.97	2	49.0	15 13.9
10	339 43 38.9	346 10 3.3	S. 0 36 44.9	1 11 7.2	3.97	3	38.1	16 1.5
11	352 30 47.1	358 46 18.8	1 44 7.5	2 15 26.2	4.97	4	24.4	16 46.8
12	4 57 10.8	11 3 58.5	2 44 46.5	3 11 54.2	5.97	5	8.8	17 30.5
13	17 7 19.0	23 7 50.3	3 36 36.9	3 58 44.3	6.97	5	52.1	18 13.6
14	29 6 11.0	35 2 59.1	4 18 7.0	4 34 37.3	7.97	6	35.1	18 56.7
15	40 58 51.5	46 54 24.0	4 48 8.0	4 58 32.7	8.97	7	18.5	19 40.6
16	52 50 10.1	58 46 41.6	5 5 45.9	5 9 42.8	9.97	8	3.0	20 25.8
17	64 44 27.2	70 43 53.1	5 10 19.4	5 7 32.8	10.97	8	49.0	21 12.6
18	76 45 22.3	82 49 14.5	5 1 21.2	4 51 44.4	11.97	9	36.7	22 1.1
19	88 55 46.4	95 5 10.9	4 38 43.7	4 22 23.0	12.97	10	25.9	22 50.9
20	101 17 38.1	107 33 14.8	4 2 48.0	3 40 7.2	13.97	11	16.2	23 41.7
21	113 52 4.9	120 14 10.2	3 14 32.1	2 46 17.1	14.97	12	7.2	* *
22	126 39 29.9	133 8 1.8	2 15 39.5	1 42 59.7	15.97	12	58.1	0 32.7
23	139 39 42.7	146 14 28.2	S. 1 8 41.0	S. 0 33 9.2	16.97	13	48.6	1 23.4
24	152 52 14.1	159 32 55.6	N. 0 3 7.7	N. 0 39 39.8	17.97	14	38.6	2 13.7
25	166 16 28.9	173 2 49.9	1 15 55.9	1 51 24.3	18.97	15	28.3	3 3.5
26	179 51 55.3	186 43 41.8	2 25 32.8	2 57 49.6	19.97	16	18.0	3 53.1
27	193 38 6.0	200 35 4.0	3 27 43.9	3 54 46.1	20.97	17	8.5	4 43.1
28	207 34 30.9	214 36 19.6	4 18 28.7	4 38 26.7	21.97	18	0.4	5 34.3
29	221 40 21.2	228 46 23.5	4 54 18.1	5 5 44.4	22.97	18	54.3	6 27.1
30	235 54 10.8	243 3 23.5	5 12 31.3	5 14 29.2	23.97	19	50.3	7 22.0
31	250 13 38.2	257 24 27.3	5 11 33.5	5 3 45.3	24.97	20	48.1	8 19.0
32	264 35 19.7	271 45 41.2	N. 4 51 11.2	N. 4 34 4.1	25.97	21	46.7	9 17.4

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
TUESDAY 1.					THURSDAY 3.				
	h m s	s				h m s	s		
0	14 1 22.71	22.959	S. 7 46 40.5	106 80	0	15 56 14.43	24.911	S. 15 11 50.9	73.68
1	14 3 40.57	22.996	7 57 20.2	106 42	1	15 58 44.01	24.949	15 19 10.0	72 68
2	14 5 58.66	23.034	8 7 57.5	106 02	2	16 1 13.82	24.987	15 26 23.1	71.67
3	14 8 16.98	23.072	8 18 32.4	105 61	3	16 3 43.85	25.023	15 33 30.0	70.63
4	14 10 35.52	23.110	8 29 4.8	105 18	4	16 6 14.10	25.060	15 40 30.7	69.59
5	14 12 54.30	23.149	8 39 34.6	104 75	5	16 8 44.57	25.096	15 47 25.1	68.54
6	14 15 13.31	23.188	8 50 1.8	104 30	6	16 11 15.25	25.132	15 54 13.2	67.49
7	14 17 32.55	23.227	9 0 26.2	103.84	7	16 13 46.15	25.168	16 0 55.0	66.42
8	14 19 52.03	23.267	9 10 47.9	103 37	8	16 16 17.26	25.202	16 7 30.2	65.33
9	14 22 11.75	23.307	9 21 6.6	102.88	9	16 18 48.57	25.235	16 13 58.9	64.23
10	14 24 31.71	23.347	9 31 22.4	102 38	10	16 21 20.08	25.269	16 20 21.0	63.13
11	14 26 51.91	23.388	9 41 35.2	101 87	11	16 23 51.80	25.303	16 26 36.5	62 02
12	14 29 12.36	23.428	9 51 44.8	101 34	12	16 26 23.71	25 334	16 32 45.2	60.89
13	14 31 33.04	23.468	10 1 51.3	100 81	13	16 28 55.81	25.366	16 38 47.2	59 76
14	14 33 53.98	23.510	10 11 54.5	100 25	14	16 31 28.10	25.397	16 44 42.3	58.61
15	14 36 15.16	23.550	10 21 54.3	99 68	15	16 34 0.57	25 427	16 50 30.5	57 45
16	14 38 36.58	23.592	10 31 50.7	99 10	16	16 36 33.22	25.457	16 56 11.7	56.28
17	14 40 58.26	23.633	10 41 43.5	98 51	17	16 39 6.05	25.487	17 1 45.9	55.12
18	14 43 20.18	23.674	10 51 32.8	97 91	18	16 41 39.06	25.515	17 7 13.1	53.93
19	14 45 42.35	23.717	11 1 18.4	97 29	19	16 44 12.23	25.542	17 12 33.1	52.73
20	14 48 4.78	23.758	11 11 0.3	96 67	20	16 46 45.56	25.568	17 17 45.9	51 53
21	14 50 27.45	23.800	11 20 38.4	96 02	21	16 49 19.04	25.593	17 22 51.5	50.33
22	14 52 50.38	23.843	11 30 12.5	95 35	22	16 51 52.68	25.619	17 27 49.8	49.11
23	14 55 13.56	23.884	S. 11 39 42.6	94.68	23	16 54 26.47	25.644	S. 17 32 40.8	47.88
WEDNESDAY 2.					FRIDAY 4.				
0	14 57 36.99	23.927	S. 11 49 8.7	94.01	0	16 57 0.41	25.667	S. 17 37 24.3	46.63
1	15 0 0.68	23.969	11 58 30.7	93.31	1	16 59 34.48	25 689	17 42 0.4	45 40
2	15 2 24.62	24.011	12 7 48.4	92.59	2	17 2 8.68	25.712	17 46 29.1	44 15
3	15 4 48.81	24.053	12 17 1.8	91.87	3	17 4 43.02	25 733	17 50 50.2	42 89
4	15 7 13.25	24 095	12 26 10.8	91.13	4	17 7 17.47	25 753	17 55 3.8	41 63
5	15 9 37.95	24.138	12 35 15.4	90.39	5	17 9 52.05	25 773	17 59 9.7	40 35
6	15 12 2.90	24 180	12 44 15.5	89.63	6	17 12 26.74	25.790	18 3 8.0	39.08
7	15 14 28.11	24.222	12 53 10.9	88 84	7	17 15 1.53	25 807	18 6 58.7	37 80
8	15 16 53.56	24.263	13 2 1.6	88 06	8	17 17 36.42	25.823	18 10 41.6	36 50
9	15 19 19.27	24.306	13 10 47.6	87.25	9	17 20 11.41	25 839	18 14 16.7	35.20
10	15 21 45.23	24.348	13 19 28.6	86 43	10	17 22 46.49	25.853	18 17 44.0	33.90
11	15 24 11.44	24.389	13 28 4.8	85 61	11	17 25 21.65	25.866	18 21 3.5	32.60
12	15 26 37.90	24.431	13 36 35.9	84.77	12	17 27 56.88	25.878	18 24 15.2	31.29
13	15 29 4.61	24.472	13 45 2.0	83.91	13	17 30 32.19	25.891	18 27 19.0	29 97
14	15 31 31.56	24.513	13 53 22.8	83.04	14	17 33 7.57	25 901	18 30 14.8	28.65
15	15 33 58.76	24.554	14 1 38.5	82 17	15	17 35 43.00	25 910	18 33 2.8	27.33
16	15 36 26.21	24.595	14 9 48.8	81.28	16	17 38 18.49	25 918	18 35 42.8	26 00
17	15 38 53.90	24.636	14 17 53.8	80.37	17	17 40 54.02	25 926	18 38 14.8	24.66
18	15 41 21.84	24.676	14 25 53.2	79.45	18	17 43 29.60	25.933	18 40 38.7	23.33
19	15 43 50.01	24.715	14 33 47.2	78.53	19	17 46 5.21	25.937	18 42 54.7	21.99
20	15 46 18.42	24 756	14 41 35.5	77.57	20	17 48 40.84	25.941	18 45 2.6	20.65
21	15 48 47.08	24.795	14 49 18.0	76.62	21	17 51 16.50	25.944	18 47 2.5	19.31
22	15 51 15.96	24.833	14 56 54.9	75.66	22	17 53 52.17	25.946	18 48 54.3	17 96
23	15 53 45.08	24.872	15 4 25.9	74.67	23	17 56 27.85	25 947	18 50 38.0	16.61
24	15 56 14.43	24.911	S. 15 11 50.9	73.68	24	17 59 3.53	25.947	S. 18 52 13.6	15.27

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
SATURDAY 5.					MONDAY 7.				
	h m s	s				h m s	s		
0	17 59 3.53	25.947	S. 18 52 13.6	15.27	0	20 1 33.48	24.727	S. 17 33 58.2	45.82
1	18 1 39.21	25.945	18 53 41.2	13.92	1	20 4 1.70	24.680	17 29 20.0	46.92
2	18 4 14.87	25.943	18 55 0.6	12.56	2	20 6 29.64	24.633	17 24 35.2	48.01
3	18 6 50.52	25.939	18 56 11.9	11.20	3	20 8 57.29	24.586	17 19 43.9	49.08
4	18 9 26.14	25.935	18 57 15.0	9.85	4	20 11 24.67	24.538	17 14 46.2	50.15
5	18 12 1.74	25.929	18 58 10.1	8.51	5	20 13 51.75	24.489	17 9 42.1	51.20
6	18 14 37.29	25.922	18 58 57.1	7.15	6	20 16 18.54	24.441	17 4 31.8	52.24
7	18 17 12.80	25.914	18 59 35.9	5.80	7	20 18 45.04	24.391	16 59 15.2	53.28
8	18 19 48.26	25.905	19 0 6.7	4.45	8	20 21 11.23	24.341	16 53 52.4	54.30
9	18 22 23.66	25.895	19 0 29.3	3.09	9	20 23 37.13	24.292	16 48 23.6	55.30
10	18 24 59.00	25.881	19 0 43.8	1.75	10	20 26 2.73	24.241	16 42 48.8	56.30
11	18 27 34.27	25.872	19 0 50.3	0.41	11	20 28 28.02	24.189	16 37 8.0	57.29
12	18 30 9.46	25.858	19 0 48.7	0.94	12	20 30 53.00	24.138	16 31 21.3	58.27
13	18 32 44.56	25.843	19 0 39.0	2.28	13	20 33 17.68	24.086	16 25 28.8	59.23
14	18 35 19.57	25.828	19 0 21.3	3.63	14	20 35 42.03	24.033	16 19 30.5	60.18
15	18 37 54.49	25.812	18 59 55.5	4.97	15	20 38 6.08	23.982	16 13 26.6	61.13
16	18 40 29.31	25.793	18 59 21.7	6.30	16	20 40 29.81	23.928	16 7 17.0	62.06
17	18 43 4.01	25.774	18 58 39.9	7.63	17	20 42 53.22	23.875	16 1 1.9	62.98
18	18 45 38.60	25.755	18 57 50.2	8.95	18	20 45 16.31	23.822	15 54 41.3	63.88
19	18 48 13.07	25.734	18 56 52.5	10.28	19	20 47 39.08	23.768	15 48 15.3	64.78
20	18 50 47.41	25.713	18 55 46.9	11.59	20	20 50 1.53	23.715	15 41 44.0	65.66
21	18 53 21.62	25.689	18 54 33.4	12.91	21	20 52 23.66	23.661	15 35 7.4	66.53
22	18 55 55.68	25.664	18 53 12.0	14.23	22	20 54 45.46	23.606	15 28 25.7	67.38
23	18 58 29.59	25.640	S. 18 51 42.7	15.53	23	20 57 6.93	23.552	S. 15 21 38.8	68.23
SUNDAY 6.					TUESDAY 8.				
0	19 1 3.36	25.614	S. 18 50 5.7	16.82	0	20 59 28.08	23.498	S. 15 14 46.9	69.07
1	19 3 36.96	25.587	18 48 20.9	18.12	1	21 1 48.90	23.443	15 7 50.0	69.89
2	19 6 10.40	25.559	18 46 28.3	19.41	2	21 4 9.39	23.388	15 0 48.2	70.70
3	19 8 43.67	25.530	18 44 28.0	20.68	3	21 6 29.55	23.333	14 53 41.6	71.49
4	19 11 16.76	25.500	18 42 20.1	21.96	4	21 8 49.38	23.278	14 46 30.3	72.28
5	19 13 49.67	25.469	18 40 4.5	23.23	5	21 11 8.88	23.223	14 39 14.2	73.06
6	19 16 22.39	25.438	18 37 41.3	24.49	6	21 13 28.06	23.168	14 31 53.6	73.82
7	19 18 54.92	25.406	18 35 10.6	25.75	7	21 15 46.90	23.112	14 24 28.4	74.58
8	19 21 27.26	25.372	18 32 32.3	27.00	8	21 18 5.40	23.057	14 16 58.7	75.31
9	19 23 59.38	25.337	18 29 46.6	28.24	9	21 20 23.58	23.003	14 9 24.7	76.03
10	19 26 31.30	25.302	18 26 53.4	29.48	10	21 22 41.43	22.947	14 1 46.3	76.75
11	19 29 3.00	25.266	18 23 52.9	30.69	11	21 24 58.94	22.892	13 54 3.7	77.45
12	19 31 34.49	25.228	18 20 45.1	31.91	12	21 27 16.13	22.837	13 46 16.9	78.15
13	19 34 5.74	25.190	18 17 30.0	33.13	13	21 29 32.98	22.782	13 38 25.9	78.83
14	19 36 36.77	25.153	18 14 7.6	34.33	14	21 31 49.51	22.727	13 30 31.0	79.48
15	19 39 7.57	25.113	18 10 38.1	35.52	15	21 34 5.70	22.672	13 22 32.1	80.15
16	19 41 38.13	25.073	18 7 1.4	36.70	16	21 36 21.57	22.618	13 14 29.2	80.79
17	19 44 8.44	25.032	18 3 17.7	37.88	17	21 38 37.11	22.563	13 6 22.6	81.42
18	19 46 38.51	24.990	17 59 26.9	39.05	18	21 40 52.32	22.508	12 58 12.2	82.04
19	19 49 8.32	24.948	17 55 29.2	40.19	19	21 43 7.20	22.453	12 49 58.1	82.65
20	19 51 37.88	24.905	17 51 24.6	41.34	20	21 45 21.76	22.399	12 41 40.4	83.24
21	19 54 7.18	24.862	17 47 13.1	42.48	21	21 47 35.99	22.345	12 33 19.2	83.83
22	19 56 36.22	24.817	17 42 54.8	43.61	22	21 49 49.90	22.292	12 24 54.5	84.40
23	19 59 4.98	24.772	17 38 29.8	44.72	23	21 52 3.49	22.238	12 16 26.4	84.97
24	20 1 33.48	24.727	S. 17 33 58.2	45.82	24	21 54 16.76	22.184	S. 12 7 54.9	85.52

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
WEDNESDAY 9.					FRIDAY 11.				
	h m s	s	S. ° ' "	"		h m s	s	S. ° ' "	"
0	21 54 16.76	22.184	S. 12 7 54.9	85.52	0	23 35 15.06	20.051	S. 4 33 57.2	99.98
1	21 56 29.70	22.132	11 59 20.2	86.06	1	23 37 15.26	20.018	4 23 57.1	100.06
2	21 58 42.34	22.079	11 50 42.2	86.58	2	23 39 15.27	19.984	4 13 56.5	100.13
3	22 0 54.65	22.026	11 42 1.2	87.10	3	23 41 15.08	19.953	4 3 55.5	100.20
4	22 3 6.65	21.973	11 33 17.0	87.61	4	23 43 14.71	19.923	3 53 54.1	100.26
5	22 5 18.33	21.921	11 24 29.9	88.10	5	23 45 14.15	19.891	3 43 52.4	100.32
6	22 7 29.70	21.869	11 15 39.8	88.59	6	23 47 13.40	19.861	3 33 50.3	100.37
7	22 9 40.76	21.818	11 6 46.8	89.06	7	23 49 12.48	19.832	3 23 48.0	100.40
8	22 11 51.51	21.767	10 57 51.1	89.52	8	23 51 11.38	19.802	3 13 45.5	100.43
9	22 14 1.96	21.716	10 48 52.6	89.97	9	23 53 10.10	19.773	3 3 42.8	100.46
10	22 16 12.10	21.664	10 39 51.5	90.41	10	23 55 8.66	19.745	2 53 40.0	100.48
11	22 18 21.93	21.614	10 30 47.7	90.84	11	23 57 7.04	19.718	2 43 37.0	100.50
12	22 20 31.47	21.565	10 21 41.4	91.26	12	23 59 5.27	19.691	2 33 34.0	100.49
13	22 22 40.71	21.515	10 12 32.6	91.67	13	0 1 3.33	19.664	2 23 31.1	100.49
14	22 24 49.65	21.465	10 3 21.4	92.07	14	0 3 1.24	19.638	2 13 28.1	100.49
15	22 26 58.29	21.417	9 54 7.8	92.45	15	0 4 58.99	19.613	2 3 25.2	100.48
16	22 29 6.65	21.368	9 44 52.0	92.83	16	0 6 56.59	19.588	1 53 22.4	100.45
17	22 31 14.71	21.320	9 35 33.9	93.20	17	0 8 54.04	19.563	1 43 19.8	100.42
18	22 33 22.49	21.273	9 26 13.6	93.56	18	0 10 51.35	19.540	1 33 17.4	100.38
19	22 35 29.98	21.225	9 16 51.2	93.90	19	0 12 48.52	19.516	1 23 15.2	100.35
20	22 37 37.19	21.178	9 7 26.8	94.23	20	0 14 45.54	19.493	1 13 13.2	100.30
21	22 39 44.11	21.131	8 58 0.4	94.57	21	0 16 42.44	19.472	1 3 11.6	100.24
22	22 41 50.76	21.086	8 48 32.0	94.88	22	0 18 39.20	19.450	0 53 10.3	100.18
23	22 43 57.14	21.040	S. 8 39 1.8	95.19	23	0 20 35.84	19.429	S. 0 43 9.4	100.12
THURSDAY 10.					SATURDAY 12.				
	h m s	s	S. ° ' "	"		h m s	s	S. ° ' "	"
0	22 46 3.24	20.994	S. 8 29 29.7	95.49	0	0 22 32.35	19.408	S. 0 33 8.9	100.04
1	22 48 9.07	20.949	8 19 55.9	95.78	1	0 24 28.74	19.389	0 23 8.9	99.97
2	22 50 14.63	20.905	8 10 20.4	96.06	2	0 26 25.02	19.370	0 13 9.3	99.88
3	22 52 19.93	20.861	8 0 43.2	96.33	3	0 28 21.18	19.350	S. 0 3 10.3	99.78
4	22 54 24.96	20.818	7 51 4.5	96.58	4	0 30 17.22	19.332	N. 0 6 48.1	99.69
5	22 56 29.74	20.775	7 41 24.2	96.84	5	0 32 13.16	19.314	0 16 46.0	99.59
6	22 58 34.26	20.733	7 31 42.4	97.08	6	0 34 8.99	19.298	0 26 43.2	99.48
7	23 0 38.53	20.690	7 21 59.2	97.32	7	0 36 4.73	19.281	0 36 39.8	99.37
8	23 2 42.54	20.648	7 12 14.6	97.53	8	0 38 0.36	19.264	0 46 35.6	99.24
9	23 4 46.31	20.608	7 2 28.8	97.75	9	0 39 55.90	19.248	0 56 30.7	99.13
10	23 6 49.83	20.567	6 52 41.6	97.97	10	0 41 51.34	19.233	1 6 25.1	98.99
11	23 8 53.11	20.527	6 42 53.2	98.16	11	0 43 46.70	19.219	1 16 18.6	98.85
12	23 10 56.15	20.487	6 33 3.7	98.35	12	0 45 41.97	19.205	1 26 11.3	98.71
13	23 12 58.95	20.448	6 23 13.0	98.53	13	0 47 37.16	19.192	1 36 3.1	98.56
14	23 15 1.52	20.409	6 13 21.4	98.69	14	0 49 32.27	19.179	1 45 54.0	98.40
15	23 17 3.86	20.372	6 3 28.7	98.87	15	0 51 27.31	19.167	1 55 43.9	98.24
16	23 19 5.98	20.333	5 53 35.0	99.02	16	0 53 22.27	19.154	2 5 32.9	98.08
17	23 21 7.86	20.296	5 43 40.5	99.17	17	0 55 17.16	19.143	2 15 20.9	97.91
18	23 23 9.53	20.260	5 33 45.0	99.31	18	0 57 11.98	19.133	2 25 7.8	97.73
19	23 25 10.98	20.223	5 23 48.8	99.43	19	0 59 6.75	19.123	2 34 53.7	97.55
20	23 27 12.21	20.188	5 13 51.8	99.55	20	1 1 1.45	19.112	2 44 38.4	97.37
21	23 29 13.23	20.153	5 3 54.2	99.67	21	1 2 56.09	19.103	2 54 22.1	97.18
22	23 31 14.04	20.118	4 53 55.8	99.78	22	1 4 50.69	19.095	3 4 4.5	96.98
23	23 33 14.65	20.085	4 43 56.8	99.88	23	1 6 45.23	19.086	3 13 45.8	96.78
24	23 35 15.06	20.051	S. 4 33 57.2	99.98	24	1 8 39.72	19.078	N. 3 23 25.8	96.57

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in rom.	Declination.	Var. in rom.	Hour.	Right Ascension.	Var. in rom.	Declination.	Var. in rom.
SUNDAY 13.					TUESDAY 15.				
	h m s	s	N. ° ' "	96° 57'		h m s	s	N. 10° 33' 27" 3	80° 73'
0	1 8 39.72	19.078	3 23 25.8	96° 57'	0	2 40 17.37	19.275	10 41 30.3	80° 28'
1	1 10 34.17	19.072	3 33 4.6	96° 35'	1	2 42 13.06	19.290	10 49 30.7	79° 83'
2	1 12 28.58	19.065	3 42 42.0	96° 13'	2	2 44 8.85	19.305	10 57 28.2	79° 36'
3	1 14 22.95	19.058	3 52 18.2	95° 91'	3	2 46 4.72	19.319	11 5 23.0	78° 90'
4	1 16 17.28	19.053	4 1 52.9	95° 68'	4	2 48 0.68	19.335	11 13 15.0	78° 43'
5	1 18 11.59	19.048	4 11 26.3	95° 45'	5	2 49 56.74	19.352	11 21 4.1	77° 95'
6	1 20 5.86	19.043	4 20 58.3	95° 22'	6	2 51 52.90	19.368	11 28 50.4	77° 48'
7	1 22 0.11	19.039	4 30 28.9	94° 97'	7	2 53 49.16	19.385	11 36 33.8	76° 99'
8	1 23 54.33	19.036	4 39 57.9	94° 72'	8	2 55 45.52	19.402	11 44 14.3	76° 50'
9	1 25 48.54	19.033	4 49 25.5	94° 47'	9	2 57 41.98	19.419	11 51 51.8	76° 01'
10	1 27 42.73	19.030	4 58 51.5	94° 20'	10	2 59 38.55	19.438	12 6 57.9	75° 00'
11	1 29 36.90	19.028	5 8 15.9	93° 93'	11	3 1 35.23	19.455	12 14 26.4	74° 49'
12	1 31 31.06	19.027	5 17 38.7	93° 67'	12	3 3 32.01	19.473	12 21 51.8	73° 98'
13	1 33 25.22	19.026	5 26 59.9	93° 40'	13	3 5 28.91	19.493	12 29 14.1	73° 46'
14	1 35 19.37	19.025	5 36 19.5	93° 13'	14	3 7 25.92	19.511	12 36 33.3	72° 93'
15	1 37 13.52	19.024	5 45 37.4	92° 83'	15	3 9 23.04	19.530	12 43 49.3	72° 41'
16	1 39 7.66	19.025	5 54 53.5	92° 54'	16	3 11 20.28	19.550	12 51 2.2	71° 88'
17	1 41 1.82	19.027	6 4 7.9	92° 25'	17	3 13 17.64	19.570	13 5 18.1	70° 78'
18	1 42 55.98	19.027	6 13 20.5	91° 95'	18	3 15 15.12	19.591	13 12 21.2	69° 68'
19	1 44 50.14	19.029	6 22 31.3	91° 65'	19	3 17 12.73	19.611	13 19 21.0	69° 12'
20	1 46 44.33	19.032	6 31 40.3	91° 33'	20	3 19 10.45	19.631		
21	1 48 38.52	19.034	6 40 47.4	91° 03'	21	3 21 8.30	19.653		
22	1 50 32.74	19.038	6 49 52.6	90° 71'	22	3 23 6.28	19.674		
23	1 52 26.97	19.041	N. 6 58 55.9	90° 38'	23	3 25 4.39	19.696		
MONDAY 14.					WEDNESDAY 16.				
	h m s	s	N. ° ' "	90° 06'		h m s	s	N. 13° 33' 10" 4	68° 55'
0	1 54 21.23	19.045	7 7 57.2	90° 06'	0	3 27 2.63	19.718	13 40 0.0	67° 98'
1	1 56 15.51	19.049	7 16 56.6	89° 73'	1	3 29 1.00	19.739	13 46 46.2	67° 41'
2	1 58 9.82	19.055	7 25 53.9	89° 38'	2	3 30 59.50	19.762	13 53 28.9	66° 83'
3	2 0 4.17	19.061	7 34 49.2	89° 05'	3	3 32 58.14	19.784	14 0 8.2	66° 25'
4	2 1 58.55	19.066	7 43 42.5	88° 70'	4	3 34 56.91	19.807	14 13 16.0	65° 05'
5	2 3 52.96	19.073	7 52 33.6	88° 34'	5	3 36 55.82	19.830	14 19 44.5	64° 46'
6	2 5 47.42	19.080	8 1 22.6	87° 98'	6	3 38 54.87	19.853	14 26 9.5	63° 85'
7	2 7 41.92	19.088	8 10 9.4	87° 63'	7	3 40 54.06	19.878	14 32 30.7	63° 23'
8	2 9 36.47	19.095	8 18 54.1	87° 26'	8	3 42 53.40	19.901	14 38 48.3	62° 00'
9	2 11 31.06	19.103	8 27 36.5	86° 88'	9	3 44 52.87	19.923	14 51 12.3	61° 37'
10	2 13 25.70	19.111	8 36 16.7	86° 51'	10	3 46 52.48	19.948	14 57 18.6	60° 73'
11	2 15 20.39	19.120	8 44 54.6	86° 13'	11	3 48 52.25	19.973	15 3 21.1	60° 10'
12	2 17 15.14	19.130	8 53 30.2	85° 74'	12	3 50 52.16	19.997	15 9 19.8	59° 46'
13	2 19 9.95	19.140	9 2 3.5	85° 36'	13	3 52 52.21	20.021	15 15 14.6	58° 81'
14	2 21 4.82	19.150	9 10 34.5	84° 96'	14	3 54 52.41	20.046	15 21 5.5	58° 16'
15	2 22 59.75	19.161	9 19 3.0	84° 55'	15	3 56 52.76	20.072	15 26 52.5	57° 50'
16	2 24 54.75	19.173	9 27 29.1	84° 14'	16	3 58 53.27	20.097	15 32 35.5	56° 83'
17	2 26 49.82	19.183	9 35 52.7	83° 73'	17	4 0 53.92	20.121	15 38 14.5	56° 17'
18	2 28 44.95	19.195	9 44 13.9	83° 33'	18	4 2 54.72	20.146	15 43 49.5	55° 49'
19	2 30 40.16	19.208	9 52 32.6	82° 90'	19	4 4 55.67	20.173	15 49 20.4	54° 82'
20	2 32 35.44	19.220	10 0 48.7	82° 48'	20	4 6 56.79	20.198	15 54 47.3	54° 13'
21	2 34 30.80	19.233	10 9 2.3	82° 05'	21	4 8 58.05	20.223	16 0 10.0	53° 44'
22	2 36 26.24	19.247	10 17 13.3	81° 61'	22	4 10 59.47	20.249		
23	2 38 21.76	19.261	10 25 21.6	81° 17'	23	4 13 1.04	20.275		
24	2 40 17.37	19.275	N. 10 33 27.3	80° 73'	24	4 15 2.77	20.302		

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
THURSDAY 17.					SATURDAY 19.				
	h m s	s	N. 0° 0' 0"	"		h m s	s	N. 18° 47' 49"	14° 64'
0	4 15 2.77	20.302	N. 16° 0' 10.0"	53.44	0	5 55 29.51	21.514	N. 18° 47' 49.5"	14° 64'
1	4 17 4.66	20.328	16 5 28.6	52.74	1	5 57 38.66	21.535	18 49 14.6	13.73
2	4 19 6.70	20.354	16 10 42.9	52.04	2	5 59 47.93	21.557	18 50 34.3	12.82
3	4 21 8.91	20.380	16 15 53.1	51.34	3	6 1 57.34	21.578	18 51 48.4	11.89
4	4 23 11.26	20.406	16 20 59.0	50.63	4	6 4 6.86	21.598	18 52 57.0	10.97
5	4 25 13.78	20.433	16 26 0.7	49.92	5	6 6 16.51	21.618	18 54 0.0	10.04
6	4 27 16.46	20.459	16 30 58.0	49.19	6	6 8 26.28	21.638	18 54 57.5	9.12
7	4 29 19.29	20.485	16 35 51.0	48.48	7	6 10 36.17	21.658	18 55 49.4	8.18
8	4 31 22.28	20.513	16 40 39.7	47.74	8	6 12 46.18	21.678	18 56 35.7	7.24
9	4 33 25.44	20.539	16 45 23.9	47.01	9	6 14 56.30	21.696	18 57 16.3	6.31
10	4 35 28.75	20.565	16 50 3.8	46.27	10	6 17 6.53	21.715	18 57 51.4	5.38
11	4 37 32.22	20.593	16 54 39.1	45.52	11	6 19 16.88	21.733	18 58 20.8	4.43
12	4 39 35.86	20.619	16 59 10.0	44.77	12	6 21 27.33	21.751	18 58 44.5	3.48
13	4 41 39.65	20.645	17 3 36.3	44.01	13	6 23 37.89	21.769	18 59 2.5	2.53
14	4 43 43.60	20.672	17 7 58.1	43.25	14	6 25 48.56	21.787	18 59 14.9	1.58
15	4 45 47.71	20.698	17 12 15.3	42.48	15	6 27 59.33	21.803	18 59 21.5	0.63
16	4 47 51.98	20.725	17 16 27.9	41.72	16	6 30 10.20	21.820	18 59 22.4	0.33
17	4 49 56.41	20.751	17 20 35.9	40.94	17	6 32 21.17	21.837	18 59 17.5	1.29
18	4 52 0.99	20.778	17 24 39.2	40.16	18	6 34 32.24	21.853	18 59 6.9	2.24
19	4 54 5.74	20.804	17 28 37.8	39.38	19	6 36 43.40	21.868	18 58 50.6	3.20
20	4 56 10.64	20.831	17 32 31.7	38.59	20	6 38 54.66	21.883	18 58 28.5	4.17
21	4 58 15.71	20.858	17 36 20.9	37.79	21	6 41 6.00	21.898	18 58 0.6	5.14
22	5 0 20.93	20.883	17 40 5.2	36.98	22	6 43 17.43	21.913	18 57 26.8	6.11
23	5 2 26.30	20.909	N. 17° 43' 44.7"	36.18	23	6 45 28.95	21.927	N. 18° 56' 47.3"	7.07
FRIDAY 18.					SUNDAY 20.				
	h m s	s	N. 17° 47' 19.4"	35.38		h m s	s	N. 18° 56' 2.0"	8.04
0	5 4 31.84	20.936	N. 17° 47' 19.4"	35.38	0	6 47 40.55	21.941	N. 18° 56' 2.0"	8.04
1	5 6 37.53	20.961	17 50 49.2	34.56	1	6 49 52.24	21.954	18 55 10.8	9.02
2	5 8 43.37	20.988	17 54 14.1	33.74	2	6 52 4.00	21.967	18 54 13.8	9.98
3	5 10 49.38	21.013	17 57 34.1	32.93	3	6 54 15.84	21.979	18 53 11.0	10.95
4	5 12 55.53	21.038	18 0 49.2	32.09	4	6 56 27.75	21.992	18 52 2.4	11.93
5	5 15 1.84	21.064	18 3 59.2	31.26	5	6 58 39.74	22.003	18 50 47.8	12.92
6	5 17 8.30	21.089	18 7 4.3	30.43	6	7 0 51.79	22.014	18 49 27.4	13.88
7	5 19 14.91	21.114	18 10 4.3	29.58	7	7 3 3.91	22.026	18 48 1.2	14.86
8	5 21 21.67	21.140	18 12 59.3	28.73	8	7 5 16.10	22.037	18 46 29.1	15.84
9	5 23 28.59	21.165	18 15 49.1	27.88	9	7 7 28.35	22.047	18 44 51.1	16.82
10	5 25 35.65	21.189	18 18 33.9	27.03	10	7 9 40.66	22.057	18 43 7.3	17.79
11	5 27 42.86	21.213	18 21 13.5	26.17	11	7 11 53.03	22.066	18 41 17.6	18.78
12	5 29 50.21	21.238	18 23 47.9	25.31	12	7 14 5.45	22.075	18 39 22.0	19.76
13	5 31 57.72	21.263	18 26 17.2	24.44	13	7 16 17.93	22.083	18 37 20.5	20.74
14	5 34 5.36	21.287	18 28 41.2	23.57	14	7 18 30.45	22.092	18 35 13.1	21.72
15	5 36 13.16	21.311	18 31 0.0	22.70	15	7 20 43.03	22.100	18 32 59.9	22.69
16	5 38 21.09	21.333	18 33 13.6	21.82	16	7 22 55.65	22.108	18 30 40.8	23.68
17	5 40 29.16	21.358	18 35 21.8	20.93	17	7 25 8.32	22.114	18 28 15.8	24.65
18	5 42 37.38	21.381	18 37 24.8	20.05	18	7 27 21.02	22.120	18 25 45.0	25.63
19	5 44 45.73	21.403	18 39 22.4	19.15	19	7 29 33.76	22.128	18 23 8.3	26.61
20	5 46 54.22	21.426	18 41 14.6	18.26	20	7 31 46.55	22.133	18 20 25.7	27.59
21	5 49 2.84	21.448	18 43 1.5	17.36	21	7 33 59.36	22.138	18 17 37.2	28.57
22	5 51 11.60	21.471	18 44 42.9	16.45	22	7 36 12.21	22.144	18 14 42.9	29.54
23	5 53 20.49	21.493	18 46 18.9	15.55	23	7 38 25.09	22.149	18 11 42.7	30.52
24	5 55 29.51	21.514	N. 18° 47' 49.5"	14.64	24	7 40 38.00	22.153	N. 18° 8' 36.7"	31.48

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
MONDAY 21.					WEDNESDAY 23.				
	h m s	s	N. 18° 8' 36" 7	31" 48		h m s	s	N. 13° 50' 17" 0	74" 63
0	7 40 38.00	22.153	18 8 36.7	31.48	0	9 26 49.98	21.994	13 50 17.0	74.63
1	7 42 50.93	22.157	18 5 24.9	32.46	1	9 29 1.92	21.986	13 42 46.8	75.42
2	7 45 3.88	22.160	18 2 7.2	33.43	2	9 31 13.81	21.978	13 35 12.0	76.18
3	7 47 16.85	22.163	17 58 43.7	34.40	3	9 33 25.65	21.969	13 27 32.6	76.95
4	7 49 29.84	22.167	17 55 14.4	35.37	4	9 35 37.44	21.961	13 19 48.6	77.72
5	7 51 42.85	22.169	17 51 39.3	36.33	5	9 37 49.18	21.953	13 12 0.0	78.48
6	7 53 55.87	22.172	17 47 58.5	37.29	6	9 40 0.87	21.943	13 4 6.9	79.23
7	7 56 8.91	22.173	17 44 11.8	38.26	7	9 42 12.50	21.934	12 56 9.3	79.96
8	7 58 21.95	22.174	17 40 19.4	39.22	8	9 44 24.08	21.925	12 48 7.4	80.69
9	8 0 35.00	22.175	17 36 21.2	40.18	9	9 46 35.60	21.917	12 40 1.0	81.43
10	8 2 48.05	22.176	17 32 17.3	41.13	10	9 48 47.08	21.908	12 31 50.3	82.15
11	8 5 1.11	22.177	17 28 7.6	42.09	11	9 50 58.50	21.898	12 23 35.2	82.86
12	8 7 14.17	22.177	17 23 52.2	43.03	12	9 53 9.86	21.890	12 15 16.0	83.56
13	8 9 27.23	22.176	17 19 31.2	43.98	13	9 55 21.18	21.882	12 6 52.5	84.27
14	8 11 40.28	22.175	17 15 4.5	44.93	14	9 57 32.44	21.872	11 58 24.8	84.96
15	8 13 53.33	22.174	17 10 32.1	45.88	15	9 59 43.64	21.863	11 49 53.0	85.63
16	8 16 6.37	22.173	17 5 54.0	46.81	16	10 1 54.80	21.855	11 41 17.2	86.32
17	8 18 19.40	22.171	17 1 10.4	47.74	17	10 4 5.90	21.846	11 32 37.2	86.99
18	8 20 32.42	22.169	16 56 21.1	48.68	18	10 6 16.95	21.838	11 23 53.3	87.65
19	8 22 45.43	22.167	16 51 26.2	49.61	19	10 8 27.95	21.829	11 15 5.4	88.30
20	8 24 58.42	22.164	16 46 25.8	50.53	20	10 10 38.90	21.820	11 6 13.7	88.94
21	8 27 11.40	22.162	16 41 19.9	51.45	21	10 12 49.79	21.812	10 57 18.1	89.58
22	8 29 24.36	22.158	16 36 8.4	52.38	22	10 15 0.64	21.803	10 48 18.7	90.22
23	8 31 37.30	22.154	N. 16 30 51.4	53.29	23	10 17 11.43	21.795	N. 10 39 15.5	90.84
TUESDAY 22.					THURSDAY 24.				
	h m s	s	N. 16 25 28.9	54.20		h m s	s	N. 10 30 8.6	91.45
0	8 33 50.21	22.151	16 25 28.9	54.20	0	10 19 22.18	21.787	10 30 8.6	91.45
1	8 36 3.11	22.147	16 20 1.0	55.10	1	10 21 32.87	21.778	10 20 58.1	92.06
2	8 38 15.97	22.143	16 14 27.7	56.01	2	10 23 43.52	21.771	10 11 43.9	92.66
3	8 40 28.82	22.138	16 8 48.9	56.91	3	10 25 54.12	21.763	10 2 26.2	93.24
4	8 42 41.63	22.133	16 3 4.8	57.80	4	10 28 4.68	21.755	9 53 5.0	93.83
5	8 44 54.41	22.128	15 57 15.3	58.70	5	10 30 15.18	21.747	9 43 40.2	94.41
6	8 47 7.16	22.123	15 51 20.4	59.58	6	10 32 25.64	21.740	9 34 12.1	94.97
7	8 49 19.88	22.118	15 45 20.3	60.46	7	10 34 36.06	21.733	9 24 40.6	95.53
8	8 51 32.57	22.112	15 39 14.9	61.33	8	10 36 46.44	21.726	9 15 5.8	96.08
9	8 53 45.22	22.105	15 33 4.3	62.21	9	10 38 56.77	21.718	9 5 27.7	96.61
10	8 55 57.83	22.099	15 26 48.4	63.08	10	10 41 7.06	21.712	8 55 46.5	97.14
11	8 58 10.41	22.093	15 20 27.4	63.93	11	10 43 17.31	21.706	8 46 2.0	97.68
12	9 0 22.95	22.086	15 14 1.3	64.79	12	10 45 27.53	21.699	8 36 14.4	98.18
13	9 2 35.44	22.079	15 7 29.9	65.65	13	10 47 37.70	21.693	8 26 23.8	98.69
14	9 4 47.90	22.073	15 0 53.5	66.48	14	10 49 47.84	21.687	8 16 30.1	99.19
15	9 7 0.31	22.065	14 54 12.1	67.33	15	10 51 57.94	21.681	8 6 33.5	99.68
16	9 9 12.68	22.058	14 47 25.6	68.17	16	10 54 8.01	21.676	7 56 34.0	100.15
17	9 11 25.01	22.051	14 40 34.1	68.99	17	10 56 18.05	21.671	7 46 31.7	100.63
18	9 13 37.29	22.043	14 33 37.7	69.82	18	10 58 28.06	21.666	7 36 26.5	101.09
19	9 15 49.52	22.035	14 26 36.3	70.63	19	11 0 38.04	21.660	7 26 18.6	101.54
20	9 18 1.71	22.028	14 19 30.1	71.44	20	11 2 47.98	21.655	7 16 8.0	101.98
21	9 20 13.85	22.019	14 12 19.0	72.25	21	11 4 57.90	21.652	7 5 54.8	102.42
22	9 22 25.94	22.012	14 5 3.1	73.05	22	11 7 7.80	21.648	6 55 39.0	102.85
23	9 24 37.99	22.003	13 57 42.4	73.84	23	11 9 17.68	21.643	6 45 20.6	103.27
24	9 26 49.98	21.994	N. 13 50 17.0	74.63	24	11 11 27.52	21.639	N. 6 34 59.8	103.67

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
FRIDAY 25.					SUNDAY 27.				
	h m s	s	N. ° ' "	103. ° ' "		h m s	s	S. ° ' "	111. ° ' "
0	11 11 27.52	21.639	N. 6 34 59.8	103.67	0	12 55 33.91	21.886	S. 2 11 26.2	111.87
1	11 13 37.35	21.638	6 24 36.6	104.07	1	12 57 45.27	21.902	2 22 37.2	111.79
2	11 15 47.17	21.634	6 14 11.0	104.46	2	12 59 56.73	21.917	2 33 47.7	111.70
3	11 17 56.96	21.631	6 3 43.1	104.84	3	13 2 8.27	21.933	2 44 57.6	111.60
4	11 20 6.74	21.629	5 53 12.9	105.21	4	13 4 19.92	21.949	2 56 6.9	111.49
5	11 22 16.51	21.627	5 42 40.6	105.57	5	13 6 31.66	21.966	3 7 15.5	111.37
6	11 24 26.26	21.624	5 32 6.1	105.93	6	13 8 43.51	21.983	3 18 23.3	111.24
7	11 26 36.00	21.623	5 21 29.5	106.27	7	13 10 55.46	22.001	3 29 30.4	111.10
8	11 28 45.74	21.623	5 10 50.9	106.60	8	13 13 7.52	22.019	3 40 36.5	110.94
9	11 30 55.47	21.622	5 0 10.3	106.93	9	13 15 19.69	22.038	3 51 41.7	110.78
10	11 33 5.20	21.621	4 49 27.8	107.23	10	13 17 31.97	22.057	4 2 45.9	110.62
11	11 35 14.92	21.621	4 38 43.5	107.54	11	13 19 44.37	22.076	4 13 49.1	110.43
12	11 37 24.65	21.621	4 27 57.3	107.84	12	13 21 56.88	22.096	4 24 51.1	110.23
13	11 39 34.37	21.621	4 17 9.4	108.13	13	13 24 9.52	22.116	4 35 51.8	110.02
14	11 41 44.10	21.623	4 6 19.8	108.40	14	13 26 22.27	22.137	4 46 51.4	109.82
15	11 43 53.84	21.624	3 55 28.6	108.66	15	13 28 35.16	22.158	4 57 49.6	109.58
16	11 46 3.59	21.626	3 44 35.9	108.92	16	13 30 48.17	22.179	5 8 46.4	109.34
17	11 48 13.35	21.627	3 33 41.6	109.18	17	13 33 1.31	22.201	5 19 41.7	109.09
18	11 50 23.11	21.629	3 22 45.8	109.41	18	13 35 14.58	22.223	5 30 35.5	108.83
19	11 52 32.90	21.633	3 11 48.7	109.63	19	13 37 27.99	22.246	5 41 27.7	108.56
20	11 54 42.70	21.635	3 0 50.2	109.85	20	13 39 41.53	22.268	5 52 18.2	108.28
21	11 56 52.52	21.639	2 49 50.5	110.06	21	13 41 55.21	22.293	6 3 7.1	107.99
22	11 59 2.37	21.643	2 38 49.5	110.26	22	13 44 9.04	22.317	6 13 54.1	107.68
23	12 1 12.23	21.647	N. 2 27 47.4	110.44	23	13 46 23.01	22.341	S. 6 24 39.3	107.37
SATURDAY 26.					MONDAY 28.				
	h m s	s	N. ° ' "	110. ° ' "		h m s	s	S. ° ' "	107. ° ' "
0	12 3 22.13	21.652	N. 2 16 44.2	110.63	0	13 48 37.13	22.365	S. 6 35 22.5	107.04
1	12 5 32.05	21.657	2 5 39.9	110.80	1	13 50 51.39	22.390	6 46 3.8	106.70
2	12 7 42.01	21.663	1 54 34.6	110.95	2	13 53 5.81	22.416	6 56 42.9	106.35
3	12 9 52.00	21.668	1 43 28.5	111.09	3	13 55 20.38	22.441	7 7 20.0	106.00
4	12 12 2.02	21.673	1 32 21.5	111.24	4	13 57 35.10	22.468	7 17 54.9	105.63
5	12 14 12.08	21.681	1 21 13.6	111.37	5	13 59 49.99	22.494	7 28 27.5	105.24
6	12 16 22.19	21.687	1 10 5.1	111.48	6	14 2 5.03	22.520	7 38 57.8	104.85
7	12 18 32.33	21.695	0 58 55.9	111.59	7	14 4 20.23	22.548	7 49 25.7	104.44
8	12 20 42.53	21.703	0 47 46.0	111.70	8	14 6 35.60	22.575	7 59 51.1	104.03
9	12 22 52.77	21.711	0 36 35.5	111.78	9	14 8 51.13	22.603	8 10 14.0	103.61
10	12 25 3.06	21.719	0 25 24.6	111.86	10	14 11 6.84	22.632	8 20 34.4	103.17
11	12 27 13.40	21.729	0 14 13.2	111.93	11	14 13 22.71	22.659	8 30 52.0	102.72
12	12 29 23.81	21.739	N. 0 3 1.5	111.98	12	14 15 38.75	22.688	8 41 7.0	102.26
13	12 31 34.27	21.748	S. 0 8 10.5	112.03	13	14 17 54.97	22.718	8 51 19.1	101.78
14	12 33 44.79	21.758	0 19 22.8	112.08	14	14 20 11.36	22.747	9 1 28.4	101.31
15	12 35 55.37	21.769	0 30 35.4	112.10	15	14 22 27.93	22.777	9 11 34.8	100.81
16	12 38 6.02	21.781	0 41 48.0	112.11	16	14 24 44.68	22.807	9 21 38.1	100.30
17	12 40 16.74	21.793	0 53 0.7	112.12	17	14 27 1.61	22.837	9 31 38.4	99.79
18	12 42 27.53	21.804	1 4 13.4	112.11	18	14 29 18.72	22.867	9 41 35.6	99.27
19	12 44 38.39	21.817	1 15 26.0	112.10	19	14 31 36.01	22.898	9 51 29.6	98.73
20	12 46 49.33	21.830	1 26 38.6	112.08	20	14 33 53.49	22.929	10 1 20.3	98.17
21	12 49 0.35	21.844	1 37 50.9	112.03	21	14 36 11.16	22.961	10 11 7.6	97.61
22	12 51 11.46	21.858	1 49 3.0	111.99	22	14 38 29.02	22.993	10 20 51.6	97.04
23	12 53 22.64	21.871	2 0 14.8	111.93	23	14 40 47.07	23.023	10 30 32.1	96.46
24	12 55 33.91	21.886	S. 2 11 26.2	111.87	24	14 43 5.30	23.055	S. 10 40 9.1	95.87

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in rom.	Declination.	Var. in rom.	Hour.	Right Ascension.	Var. in rom.	Declination.	Var. in rom.
TUESDAY 29.					THURSDAY 31.				
	h m s	s	S. 10 40 9	95 87		h m s	s	S. 16 51 0	54 69
0	14 43 53	23 055	10 40 9	95 87	0	16 37 33	24 603	16 51 0	54 69
1	14 45 23	23 088	10 49 42	95 25	1	16 40 11	24 629	16 56 25	53 60
2	14 47 42	23 120	10 59 12	94 63	2	16 42 29	24 655	17 1 43	52 50
3	14 50 11	23 153	11 8 38	94 02	3	16 44 57	24 682	17 6 55	51 39
4	14 52 20	23 185	11 18 03	93 38	4	16 47 25	24 707	17 12 06	50 28
5	14 54 39	23 218	11 27 18	92 72	5	16 49 53	24 731	17 16 58	49 14
6	14 56 58	23 251	11 36 32	92 06	6	16 52 21	24 756	17 21 50	48 01
7	14 59 18	23 284	11 45 43	91 39	7	16 54 50	24 780	17 26 35	46 88
8	15 1 38	23 317	11 54 49	90 70	8	16 57 19	24 803	17 31 12	45 73
9	15 3 58	23 351	12 3 51	90 00	9	16 59 48	24 825	17 35 43	44 57
10	15 6 18	23 384	12 12 49	89 30	10	17 2 17	24 847	17 40 7	43 41
11	15 8 38	23 418	12 21 43	88 58	11	17 4 46	24 868	17 44 24	42 24
12	15 10 59	23 452	12 30 32	87 85	12	17 7 15	24 890	17 48 34	41 07
13	15 13 20	23 485	12 39 17	87 11	13	17 9 45	24 909	17 52 37	39 88
14	15 15 41	23 518	12 47 57	86 36	14	17 12 14	24 928	17 56 33	38 70
15	15 18 2	23 553	12 56 33	85 60	15	17 14 44	24 948	18 0 21	37 51
16	15 20 23	23 587	13 5 51	84 83	16	17 17 13	24 966	18 4 32	36 31
17	15 22 45	23 620	13 13 31	84 04	17	17 19 43	24 983	18 7 37	35 11
18	15 25 7	23 653	13 21 53	83 25	18	17 22 13	25 000	18 11 45	33 90
19	15 27 29	23 688	13 30 10	82 44	19	17 24 43	25 017	18 14 24	32 68
20	15 29 51	23 723	13 38 22	81 63	20	17 27 13	25 032	18 17 36	31 47
21	15 32 14	23 755	13 46 30	80 80	21	17 29 44	25 046	18 20 41	30 24
22	15 34 36	23 789	13 54 32	79 97	22	17 32 14	25 060	18 23 39	29 01
23	15 36 59	23 823	S. 14 2 29	79 13	23	17 34 44	25 073	S. 18 26 30	27 78
WEDNESDAY 30.					FRIDAY, FEB. 1.				
0	15 39 22	23 857	S. 14 10 22	78 26	0	17 37 15	25 086	S. 18 29 13	26 54
1	15 41 45	23 891	14 18 8	77 38					
2	15 44 9	23 924	14 25 50	76 51					
3	15 46 32	23 957	14 33 27	75 63					
4	15 48 56	23 990	14 40 58	74 73					
5	15 51 20	24 023	14 48 23	73 81					
6	15 53 44	24 057	14 55 43	72 89					
7	15 56 9	24 089	15 2 58	71 97					
8	15 58 34	24 122	15 10 7	71 03					
9	16 0 58	24 154	15 17 10	70 07					
10	16 3 23	24 186	15 24 8	69 11					
11	16 5 49	24 218	15 31 0	68 14					
12	16 8 14	24 248	15 37 46	67 17					
13	16 10 40	24 280	15 44 26	66 17					
14	16 13 5	24 312	15 51 0	65 18					
15	16 15 31	24 343	15 57 28	64 18					
16	16 17 57	24 373	16 3 50	63 15					
17	16 20 24	24 403	16 10 5	62 13					
18	16 22 50	24 433	16 16 15	61 09					
19	16 25 17	24 462	16 22 19	60 04					
20	16 27 44	24 491	16 28 16	58 99					
21	16 30 11	24 518	16 34 6	57 93					
22	16 32 38	24 547	16 39 51	56 87					
23	16 35 5	24 575	16 45 29	55 78					
24	16 37 33	24 603	S. 16 51 0	54 69					

PHASES OF THE MOON.

			h m
Jan. 6	●	New Moon	- - - 47 7
13	☾	First Quarter	- - 10 44 5
21	○	Full Moon	- - 12 56 7
28	☾	Last Quarter	- - 17 52 9

		h
Jan. 3	☾	Perigee - - - 22 2
15	☾	Apogee - - - 16 7
31	☾	Perigee - - - 9 4

AT APPARENT NOON.

Date.	THE SUN'S				Sidereal Time of the Semi- diameter passing the Meridian.*	Equation of Time, to be added to Apparent Time.	Var. in hour.
	Apparent Right Ascension.	Var. in hour.	Apparent Declination.	Var. in hour.			
	h m s	s	° ' "	"	m s	m s	s
Frid.	1 20 55 21.53	10.227	S. 17 22 15.1	41 97	1 8.33	13 36.35	0.369
Sat.	2 20 59 26.57	10.193	17 5 18.6	42.73	1 8.22	13 44.81	0.336
Sun.	3 21 3 30.79	10.159	16 48 4.0	43.48	1 8.10	13 52.46	0.302
Mon.	4 21 7 34.20	10.125	16 30 31.8	44.20	1 7.98	13 59.30	0.268
Tues.	5 21 11 36.80	10.091	16 12 42.5	44.90	1 7.87	14 5.32	0.234
Wed.	6 21 15 38.58	10.057	15 54 36.4	45.60	1 7.75	14 10.53	0.200
Thur.	7 21 19 39.53	10.023	15 36 13.9	46.27	1 7.64	14 14.92	0.166
Frid.	8 21 23 39.67	9.989	15 17 35.5	46.92	1 7.53	14 18.49	0.132
Sat.	9 21 27 38.99	9.955	14 58 41.6	47.56	1 7.41	14 21.25	0.098
Sun.	10 21 31 37.50	9.921	14 39 32.6	48.18	1 7.30	14 23.20	0.065
Mon.	11 21 35 35.21	9.888	14 20 9.0	48.78	1 7.19	14 24.35	0.031
Tues.	12 21 39 32.12	9.855	14 0 31.1	49.37	1 7.08	14 24.71	0.001
Wed.	13 21 43 28.25	9.822	13 40 39.4	49.93	1 6.97	14 24.28	0.034
Thur.	14 21 47 23.59	9.790	13 20 34.4	50.48	1 6.87	14 23.07	0.066
Frid.	15 21 51 18.16	9.758	13 0 16.4	51.01	1 6.76	14 21.10	0.098
Sat.	16 21 55 11.98	9.727	12 39 45.8	51.53	1 6.66	14 18.37	0.129
Sun.	17 21 59 5.06	9.697	12 19 3.1	52.03	1 6.55	14 14.91	0.159
Mon.	18 22 2 57.42	9.667	11 58 8.6	52.51	1 6.45	14 10.72	0.189
Tues.	19 22 6 49.06	9.637	11 37 2.8	52.97	1 6.35	14 5.82	0.219
Wed.	20 22 10 40.01	9.609	11 15 46.1	53.42	1 6.25	14 0.23	0.247
Thur.	21 22 14 30.28	9.581	10 54 18.8	53.85	1 6.16	13 53.97	0.275
Frid.	22 22 18 19.90	9.554	10 32 41.4	54.26	1 6.06	13 47.05	0.302
Sat.	23 22 22 8.88	9.528	10 10 54.3	54.66	1 5.97	13 39.50	0.327
Sun.	24 22 25 57.25	9.502	9 48 57.8	55.04	1 5.88	13 31.34	0.352
Mon.	25 22 29 45.01	9.478	9 26 52.3	55.41	1 5.79	13 22.58	0.377
Tues.	26 22 33 32.20	9.455	9 4 38.2	55.76	1 5.71	13 13.24	0.401
Wed.	27 22 37 18.83	9.432	8 42 15.9	56.09	1 5.62	13 3.34	0.424
Thur.	28 22 41 4.92	9.409	8 19 45.9	56.40	1 5.54	12 52.90	0.446
Frid.	29 22 44 50.48	9.388	7 57 8.5	56.71	1 5.46	12 41.94	0.467
Sat.	30 22 48 35.53	9.367	S. 7 34 24.0	56.99	1 5.39	12 30.47	0.488

* Mean Time of the Semidiameter passing may be found by subtracting 0.18 from the Sidereal Time.

AT MEAN NOON.

		THE SUN'S			Equation of Time, to be added to Apparent Time.	Sidereal Time.
		Apparent Right Ascension.	Apparent Declination.	Semi- diameter.*		
Date.						
		h m s	S. ° ' "	' "	m s	h m s
Frid.	1	20 55 19.21	S. 17 22 24.6	16 15.43	13 36.26	20 41 42.95
Sat.	2	20 59 24.23	17 5 28.3	16 15.28	13 44.73	20 45 39.50
Sun.	3	21 3 28.44	16 48 14.1	16 15.13	13 52.39	20 49 36.06
Mon.	4	21 7 31.84	16 30 42.2	16 14.97	13 59.23	20 53 32.61
Tues.	5	21 11 34.43	16 12 53.0	16 14.82	14 5.26	20 57 29.17
Wed.	6	21 15 36.20	15 54 47.1	16 14.66	14 10.48	21 1 25.72
Thur.	7	21 19 37.15	15 36 24.9	16 14.49	14 14.88	21 5 22.28
Frid.	8	21 23 37.29	15 17 46.7	16 14.33	14 18.46	21 9 18.83
Sat.	9	21 27 36.61	14 58 52.9	16 14.16	14 21.23	21 13 15.38
Sun.	10	21 31 35.13	14 39 44.1	16 13.99	14 23.19	21 17 11.94
Mon.	11	21 35 32.84	14 20 20.7	16 13.81	14 24.35	21 21 8.49
Tues.	12	21 39 29.76	14 0 43.0	16 13.63	14 24.71	21 25 5.05
Wed.	13	21 43 25.89	13 40 51.4	16 13.45	14 24.29	21 29 1.60
Thur.	14	21 47 21.24	13 20 46.5	16 13.27	14 23.09	21 32 58.15
Frid.	15	21 51 15.83	13 0 28.6	16 13.08	14 21.12	21 36 54.71
Sat.	16	21 55 9.67	12 39 58.1	16 12.88	14 18.41	21 40 51.26
Sun.	17	21 59 2.76	12 19 15.4	16 12.68	14 14.95	21 44 47.81
Mon.	18	22 2 55.13	11 58 21.0	16 12.48	14 10.77	21 48 44.37
Tues.	19	22 6 46.79	11 37 15.3	16 12.27	14 5.87	21 52 40.92
Wed.	20	22 10 37.76	11 15 58.6	16 12.06	14 0.29	21 56 37.47
Thur.	21	22 14 28.06	10 54 31.3	16 11.85	13 54.03	22 0 34.03
Frid.	22	22 18 17.70	10 32 53.9	16 11.63	13 47.12	22 4 30.58
Sat.	23	22 22 6.71	10 11 6.7	16 11.40	13 39.58	22 8 27.13
Sun.	24	22 25 55.10	9 49 10.1	16 11.17	13 31.42	22 12 23.69
Mon.	25	22 29 42.90	9 27 4.6	16 10.94	13 22.66	22 16 20.24
Tues.	26	22 33 30.12	9 4 50.5	16 10.70	13 13.33	22 20 16.79
Wed.	27	22 37 16.78	8 42 28.1	16 10.46	13 3.43	22 24 13.34
Thur.	28	22 41 2.90	8 19 58.0	16 10.22	12 53.00	22 28 9.90
Frid.	29	22 44 48.49	7 57 20.5	16 9.97	12 42.04	22 32 6.45
Sat.	30	22 48 33.58	S. 7 34 35.9	16 9.73	12 30.57	22 36 3.00

* The Semidiameter for Apparent Noon may be assumed the same as that for Mean Noon.

MEAN TIME.

Day.	THE SUN'S <i>Apparent</i>		Logarithm of the Radius Vector of the Earth.	Transit of the First Point of Aries.	THE MOON'S			
	Longitude.	Latitude.			Semidiameter.		Horizontal Parallax.	
	Noon.	Noon.			Noon.	Midnight.	Noon.	Midnight.
1	311 22 14.4	N. 0.72	9.9936102	^h 3 17 44.57	16 12.50	16 11.53	59 29.22	59 25.67
2	312 23 8.9	0.66	.9936763	3 13 48.66	16 9.95	16 7.73	59 19.86	59 11.71
3	313 24 2.4	0.57	.9937438	3 9 52.75	16 4.87	16 1.40	59 1.22	58 48.47
4	314 24 54.9	0.45	9.9938126	3 5 56.84	15 57.34	15 52.77	58 33.58	58 16.79
5	315 25 46.3	0.32	.9938826	3 2 0.93	15 47.75	15 42.38	57 58.37	57 38.65
6	316 26 36.5	0.19	.9939538	2 58 5.02	15 36.75	15 30.99	57 18.02	56 56.88
7	317 27 25.4	N. 0.06	9.9940263	^h 2 54 9.12	15 25.21	15 19.50	56 35.63	56 14.70
8	318 28 12.9	S. 0.07	.9941001	2 50 13.21	15 13.99	15 8.78	55 54.48	55 35.33
9	319 28 58.9	0.18	.9941752	2 46 17.30	15 3.95	14 59.59	55 17.61	55 1.61
10	320 29 43.4	0.26	9.9942517	2 42 21.39	14 55.77	14 52.55	54 47.59	54 35.77
11	321 30 26.2	0.33	.9943298	2 38 25.48	14 49.97	14 48.09	54 26.33	54 19.40
12	322 31 7.5	0.38	.9944094	2 34 29.58	14 46.91	14 46.45	54 15.08	54 13.41
13	323 31 47.1	0.39	9.9944907	2 30 33.67	14 46.72	14 47.71	54 14.40	54 18.04
14	324 32 25.0	0.37	.9945737	2 26 37.76	14 49.41	14 51.77	54 24.25	54 32.93
15	325 33 1.2	0.33	.9946584	2 22 41.85	14 54.77	14 58.35	54 43.93	54 57.07
16	326 33 35.7	0.26	9.9947451	2 18 45.94	15 2.45	15 7.01	55 12.13	55 28.84
17	327 34 8.5	0.17	.9948336	2 14 50.04	15 11.93	15 17.14	55 46.92	56 6.04
18	328 34 39.6	S. 0.06	.9949241	2 10 54.13	15 22.54	15 28.02	56 25.85	56 45.98
19	329 35 9.0	N. 0.07	9.9950166	2 6 58.22	15 33.49	15 38.85	57 6.05	57 25.70
20	330 35 36.7	0.21	.9951112	2 3 2.31	15 43.99	15 48.82	57 44.57	58 2.32
21	331 36 2.9	0.35	.9952079	1 59 6.41	15 53.28	15 57.28	58 18.66	58 33.35
22	332 36 27.4	0.48	9.9953067	1 55 10.50	16 0.78	16 3.76	58 46.21	58 57.12
23	333 36 50.5	0.60	.9954074	1 51 14.59	16 6.18	16 8.05	59 6.01	59 12.89
24	334 37 12.1	0.70	.9955099	1 47 18.69	16 9.39	16 10.23	59 17.81	59 20.87
25	335 37 32.2	0.78	9.9956142	1 43 22.78	16 10.59	16 10.51	59 22.19	59 21.92
26	336 37 50.9	0.82	.9957201	1 39 26.87	16 10.04	16 9.22	59 20.20	59 17.18
27	337 38 8.2	0.83	.9958274	1 35 30.97	16 8.08	16 6.64	59 12.99	59 7.71
28	338 38 24.1	0.80	9.9959359	1 31 35.06	16 4.93	16 2.96	59 1.43	58 54.21
29	339 38 38.5	0.75	.9960454	1 27 39.15	16 0.74	15 58.27	58 46.06	58 37.00
30	340 38 51.4	N. 0.67	9.9961558	1 23 43.25	15 55.56	15 52.59	58 27.03	58 16.12

MEAN TIME.

Day	THE MOON'S						
	Longitude.		Latitude.		Age.	Meridian Passage.	
	Noon.	Midnight.	Noon.	Midnight.	Noon.	Upper.	Lower.
1	264° 35' 19.7	271° 45' 41.2	N. 4° 51' 11.2	N. 4° 34' 4.1	25.97	21 46.7	9 17.4
2	278 54 55.7	286 2 26.8	4 12 42.1	3 47 28.9	26.97	22 45.0	10 16.0
3	293 7 34.5	300 9 46.3	3 18 52.5	2 47 24.9	27.97	23 41.6	11 13.6
4	307 8 27.9	314 3 10.5	2 13 40.6	1 38 15.5	28.97	* *	12 8.9
5	320 53 29.4	327 39 5.5	N. 1 1 45.9	N. 0 24 47.5	0.43	0 35.5	13 1.4
6	334 19 45.8	340 55 23.2	S. 0 12 5.9	S. 0 48 22.9	1.43	1 26.6	13 51.0
7	347 25 56.6	353 51 31.0	1 23 34.9	1 57 16.7	2.43	2 14.9	14 38.1
8	0 12 16.9	6 28 29.8	2 29 6.2	2 58 44.7	3.43	3 0.9	15 23.3
9	12 40 29.7	18 48 40.9	3 25 56.7	3 50 29.3	4.43	3 45.4	16 7.3
10	24 53 30.6	30 55 29.1	4 12 11.9	4 30 55.9	5.43	4 29.1	16 50.9
11	36 55 8.6	42 53 3.3	4 46 34.7	4 59 2.8	6.43	5 12.7	17 34.7
12	48 49 48.3	54 45 59.3	5 8 15.8	5 14 10.3	7.43	5 56.9	18 19.3
13	60 42 12.4	66 39 2.7	5 16 43.7	5 15 54.0	8.43	6 42.1	19 5.2
14	72 37 5.3	78 36 53.5	5 11 40.2	5 4 1.7	9.43	7 28.7	19 52.6
15	84 38 59.1	90 43 51.5	4 52 59.3	4 38 35.0	10.43	8 16.9	20 41.5
16	96 51 57.7	103 3 41.5	4 20 52.2	3 59 56.5	11.43	9 6.4	21 31.7
17	109 19 23.0	115 39 18.7	3 35 55.7	3 9 0.1	12.43	9 57.1	22 22.7
18	122 3 40.6	128 32 36.0	2 39 23.6	2 7 22.9	13.43	10 48.4	23 14.1
19	135 6 7.7	141 44 13.4	1 33 18.5	S. 0 57 34.6	14.43	11 39.8	* *
20	148 26 46.4	155 13 35.0	S. 0 20 38.9	N. 0 16 57.8	15.43	12 31.1	0 5.5
21	162 4 23.2	168 58 51.5	N. 0 54 41.9	1 31 58.0	16.43	13 22.2	0 56.7
22	175 56 37.0	182 57 14.3	2 8 9.4	2 42 39.6	17.43	14 13.2	1 47.7
23	190 0 16.2	197 5 14.7	3 14 52.7	3 44 15.0	18.43	15 4.7	2 38.9
24	204 11 41.2	211 19 8.1	4 10 15.7	4 32 27.6	19.43	15 57.1	3 30.8
25	218 27 8.3	225 35 16.8	4 50 28.2	5 3 59.6	20.43	16 50.7	4 23.7
26	232 43 10.2	239 50 26.9	5 12 49.3	5 16 49.8	21.43	17 45.9	5 18.1
27	246 56 47.9	254 1 55.5	5 15 59.0	5 10 19.9	22.43	18 42.4	6 14.0
28	261 5 34.1	268 7 29.6	5 0 0.4	4 45 13.1	23.43	19 39.6	7 10.9
29	275 7 29.3	282 5 20.6	4 26 14.7	4 3 25.7	24.43	20 36.5	8 8.1
30	289 0 52.5	295 53 53.9	N. 3 37 10.0	N. 3 7 54.7	25.43	21 32.2	9 4.6

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
FRIDAY 1.					SUNDAY 3.				
	h m s	s	S. 18° 29' 13" 0	26.54		h m s	s	S. 18° 11' 45" 4	33.23
0	17 37 15.34	25.086	18 31 48.5	25.30	0	19 37 30.51	24.693	18 8 22.5	34.40
1	17 39 45.89	25.098	18 34 16.6	24.07	1	19 39 58.59	24.665	18 4 52.6	35.55
2	17 42 16.51	25.108	18 36 37.3	22.82	2	19 42 26.49	24.636	18 1 15.9	36.69
3	17 44 47.19	25.118	18 38 50.4	21.56	3	19 44 54.22	24.606	17 57 32.3	37.84
4	17 47 17.93	25.128	18 40 56.0	20.31	4	19 47 21.76	24.576	17 53 41.8	38.98
5	17 49 48.72	25.136	18 42 54.1	19.05	5	19 49 49.13	24.545	17 49 44.5	40.10
6	17 52 19.56	25.144	18 44 44.6	17.79	6	19 52 16.30	24.513	17 45 40.6	41.22
7	17 54 50.45	25.151	18 46 27.6	16.53	7	19 54 43.28	24.481	17 41 29.9	42.33
8	17 57 21.37	25.156	18 48 3.0	15.27	8	19 57 10.07	24.448	17 37 12.6	43.43
9	17 59 52.32	25.162	18 49 30.8	14.01	9	19 59 36.65	24.414	17 32 48.7	44.53
10	18 2 23.31	25.166	18 50 51.1	12.74	10	20 2 3.04	24.380	17 28 18.3	45.61
11	18 4 54.31	25.169	18 52 3.7	11.47	11	20 4 29.21	24.344	17 23 41.4	46.68
12	18 7 25.34	25.173	18 53 8.7	10.19	12	20 6 55.17	24.309	17 18 58.1	47.75
13	18 9 56.38	25.173	18 54 6.0	8.93	13	20 9 20.92	24.274	17 14 8.4	48.82
14	18 12 27.42	25.174	18 54 55.8	7.66	14	20 11 46.46	24.238	17 9 12.3	49.88
15	18 14 58.47	25.175	18 55 37.9	6.38	15	20 14 11.77	24.199	16 59 1.4	50.91
16	18 17 29.52	25.174	18 56 12.4	5.11	16	20 16 36.85	24.162	16 53 46.6	51.94
17	18 20 0.56	25.172	18 56 39.2	3.83	17	20 19 1.71	24.125	16 48 25.8	52.97
18	18 22 31.58	25.169	18 57 10.0	2.57	18	20 21 26.35	24.087	16 42 58.8	53.98
19	18 25 2.59	25.166	18 57 13.9	1.29	19	20 23 50.75	24.047	16 37 25.9	54.99
20	18 27 33.57	25.162	18 57 10.2	0.02	20	20 26 14.91	23.968	16 31 47.1	55.96
21	18 30 4.53	25.157	18 56 58.9	2.52	21	20 28 38.83	23.886	16 26 2.4	57.93
22	18 32 35.45	25.150			22	20 31 2.52			
23	18 35 6.33	25.143			23	20 33 25.96			
SATURDAY 2.					MONDAY 4.				
	h m s	s	S. 18° 56' 40" 0	3.78		h m s	s	S. 16° 20' 11" 9	58.90
0	18 37 37.17	25.135	18 56 13.5	5.05	0	20 35 49.15	23.845	16 14 15.6	59.86
1	18 40 7.95	25.127	18 55 39.4	6.32	1	20 38 12.10	23.803	16 8 13.6	60.81
2	18 42 38.69	25.118	18 54 57.7	7.58	2	20 40 34.79	23.761	16 2 5.9	61.74
3	18 45 9.36	25.106	18 54 8.4	8.84	3	20 42 57.23	23.719	15 55 52.7	62.66
4	18 47 39.96	25.095	18 53 11.6	10.09	4	20 45 19.42	23.677	15 49 34.0	63.58
5	18 50 10.50	25.083	18 52 7.3	11.35	5	20 47 41.35	23.633	15 43 9.8	64.48
6	18 52 40.96	25.070	18 50 55.4	12.61	6	20 50 3.02	23.590	15 36 40.3	65.37
7	18 55 11.34	25.057	18 49 36.0	13.85	7	20 52 24.43	23.547	15 30 5.4	66.26
8	18 57 41.64	25.042	18 48 9.2	15.10	8	20 54 45.58	23.503	15 23 25.2	67.13
9	19 0 11.84	25.025	18 46 34.8	16.35	9	20 57 6.46	23.458	15 16 39.9	67.98
10	19 2 41.94	25.009	18 44 53.0	17.58	10	20 59 27.08	23.415	15 9 49.5	68.83
11	19 5 11.95	24.992	18 43 3.9	18.81	11	21 1 47.44	23.370	15 2 53.9	69.68
12	19 7 41.84	24.973	18 41 7.3	20.05	12	21 4 7.52	23.324	14 55 53.4	70.49
13	19 10 11.63	24.955	18 39 3.3	21.28	13	21 6 27.33	23.280	14 48 48.0	71.31
14	19 12 41.30	24.934	18 36 52.0	22.49	14	21 8 46.88	23.235	14 41 37.7	72.12
15	19 15 10.84	24.913	18 34 33.4	23.70	15	21 11 6.15	23.188	14 34 22.6	72.92
16	19 17 40.26	24.893	18 32 7.6	24.92	16	21 13 25.14	23.143	14 27 2.7	73.70
17	19 20 9.55	24.870	18 29 34.4	26.13	17	21 15 43.87	23.098	14 19 38.2	74.47
18	19 22 38.70	24.848	18 26 54.1	27.32	18	21 18 2.32	23.052	14 12 9.1	75.23
19	19 25 7.72	24.824	18 24 6.6	28.52	19	21 20 20.49	23.005	14 4 35.5	75.98
20	19 27 36.59	24.798	18 21 11.9	29.71	20	21 22 38.38	22.959	13 56 57.4	76.72
21	19 30 5.30	24.773	18 18 10.1	30.89	21	21 24 56.00	22.914	13 49 14.9	77.45
22	19 32 33.87	24.748	18 15 1.2	32.06	22	21 27 13.35	22.868	13 41 28.0	78.16
23	19 35 2.27	24.720			23	21 29 30.41	22.821		
24	19 37 30.51	24.693	S. 18 11 45.4	33.23	24	21 31 47.20	22.775	S. 13 33 37.0	78.86

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
TUESDAY 5.					THURSDAY 7.				
	h m s	s	° ' "	"		h m s	s	° ' "	"
0	21 31 47.20	22.775	S. 13 33 37.0	78.86	0	23 15 56.93	20.711	S. 6 14 58.0	99.83
1	21 34 3.71	22.728	13 25 41.7	79.56	1	23 18 1.09	20.675	6 4 58.5	100.01
2	21 36 19.94	22.682	13 17 42.3	80.24	2	23 20 5.03	20.640	5 54 57.9	100.18
3	21 38 35.89	22.635	13 9 38.8	80.92	3	23 22 8.77	20.605	5 44 56.3	100.36
4	21 40 51.56	22.588	13 1 31.3	81.57	4	23 24 12.29	20.569	5 34 53.6	100.52
5	21 43 6.95	22.542	12 53 20.0	82.22	5	23 26 15.60	20.535	5 24 50.1	100.67
6	21 45 22.06	22.496	12 45 4.7	82.86	6	23 28 18.71	20.501	5 14 45.6	100.82
7	21 47 36.90	22.450	12 36 45.7	83.48	7	23 30 21.61	20.468	5 4 40.3	100.94
8	21 49 51.46	22.403	12 28 23.0	84.09	8	23 32 24.32	20.435	4 54 34.3	101.06
9	21 52 5.74	22.357	12 19 56.6	84.70	9	23 34 26.83	20.402	4 44 27.6	101.18
10	21 54 19.74	22.311	12 11 26.6	85.29	10	23 36 29.14	20.369	4 34 20.1	101.29
11	21 56 33.47	22.265	12 2 53.1	85.87	11	23 38 31.26	20.338	4 24 12.1	101.38
12	21 58 46.92	22.218	11 54 16.2	86.43	12	23 40 33.19	20.306	4 14 3.5	101.48
13	22 1 0.09	22.173	11 45 35.9	87.00	13	23 42 34.93	20.275	4 3 54.4	101.56
14	22 3 13.00	22.128	11 36 52.2	87.55	14	23 44 36.49	20.245	3 53 44.8	101.64
15	22 5 25.62	22.081	11 28 5.3	88.08	15	23 46 37.87	20.214	3 43 34.7	101.70
16	22 7 37.97	22.036	11 19 15.3	88.60	16	23 48 39.06	20.184	3 33 24.4	101.75
17	22 9 50.05	21.991	11 10 22.1	89.13	17	23 50 40.08	20.155	3 23 13.7	101.81
18	22 12 1.86	21.946	11 1 25.8	89.63	18	23 52 40.92	20.127	3 13 2.7	101.85
19	22 14 13.40	21.901	10 52 26.6	90.11	19	23 54 41.60	20.098	3 2 51.5	101.88
20	22 16 24.67	21.857	10 43 24.5	90.59	20	23 56 42.10	20.070	2 52 40.2	101.90
21	22 18 35.68	21.812	10 34 19.5	91.07	21	23 58 42.44	20.043	2 42 28.7	101.93
22	22 20 46.41	21.767	10 25 11.7	91.53	22	0 0 42.62	20.016	2 32 17.1	101.93
23	22 22 56.88	21.723	S. 10 16 1.2	91.97	23	0 2 42.63	19.989	S. 2 22 5.5	101.93
WEDNESDAY 6.					FRIDAY 8.				
	h m s	s	° ' "	"		h m s	s	° ' "	"
0	22 25 7.09	21.679	S. 10 6 48.1	92.41	0	0 4 42.49	19.963	S. 2 11 53.9	101.93
1	22 27 17.03	21.635	9 57 32.3	92.83	1	0 6 42.19	19.938	2 1 42.4	101.91
2	22 29 26.71	21.592	9 48 14.1	93.25	2	0 8 41.74	19.913	1 51 31.0	101.89
3	22 31 36.13	21.548	9 38 53.3	93.66	3	0 10 41.15	19.888	1 41 19.7	101.87
4	22 33 45.29	21.505	9 29 30.2	94.05	4	0 12 40.40	19.863	1 31 8.6	101.83
5	22 35 54.19	21.463	9 20 4.7	94.44	5	0 14 39.51	19.840	1 20 57.7	101.78
6	22 38 2.84	21.421	9 10 36.9	94.81	6	0 16 38.48	19.817	1 10 47.2	101.73
7	22 40 11.24	21.378	9 1 7.0	95.17	7	0 18 37.31	19.794	1 0 36.9	101.68
8	22 42 19.38	21.336	8 51 34.9	95.53	8	0 20 36.01	19.772	0 50 27.0	101.61
9	22 44 27.27	21.295	8 42 0.7	95.88	9	0 22 34.57	19.749	0 40 17.6	101.53
10	22 46 34.92	21.254	8 32 24.4	96.21	10	0 24 33.00	19.728	0 30 8.6	101.47
11	22 48 42.32	21.213	8 22 46.2	96.52	11	0 26 31.31	19.708	0 20 0.0	101.38
12	22 50 49.47	21.172	8 13 6.2	96.83	12	0 28 29.49	19.687	S. 0 9 52.0	101.28
13	22 52 56.38	21.132	8 3 24.2	97.14	13	0 30 27.55	19.667	N. 0 0 15.4	101.18
14	22 55 3.05	21.092	7 53 40.5	97.43	14	0 32 25.49	19.647	0 10 22.2	101.08
15	22 57 9.48	21.052	7 43 55.0	97.72	15	0 34 23.31	19.628	0 20 28.3	100.97
16	22 59 15.67	21.013	7 34 7.9	97.98	16	0 36 21.03	19.610	0 30 33.8	100.85
17	23 1 21.63	20.973	7 24 19.2	98.25	17	0 38 18.63	19.591	0 40 38.5	100.72
18	23 3 27.35	20.935	7 14 28.9	98.50	18	0 40 16.12	19.573	0 50 42.4	100.58
19	23 5 32.85	20.897	7 4 37.2	98.74	19	0 42 13.51	19.557	1 0 45.5	100.44
20	23 7 38.11	20.858	6 54 44.0	98.98	20	0 44 10.80	19.540	1 10 47.7	100.30
21	23 9 43.15	20.821	6 44 49.4	99.21	21	0 46 7.99	19.524	1 20 49.1	100.15
22	23 11 47.96	20.784	6 34 53.5	99.42	22	0 48 5.09	19.508	1 30 49.5	99.99
23	23 13 52.56	20.748	6 24 56.4	99.63	23	0 50 2.09	19.493	1 40 49.0	99.83
24	23 15 56.93	20.711	S. 6 14 58.0	99.83	24	0 51 59.00	19.478	N. 1 50 47.5	99.66

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
SATURDAY 9.					MONDAY 11.				
	h m s					h m s			
0	0 51 59.00	19.478	N. 1 50 47.5	99.66	0	2 24 39.03	19.304	N. 9 18 39.3	84.93
1	0 53 55.82	19.463	2 0 44.9	99.48	1	2 26 34.87	19.311	9 27 7.6	84.49
2	0 55 52.56	19.450	2 10 41.3	99.30	2	2 28 30.76	19.318	9 35 33.2	84.05
3	0 57 49.22	19.437	2 20 36.5	99.10	3	2 30 26.69	19.326	9 43 56.2	83.62
4	0 59 45.80	19.423	2 30 30.5	98.91	4	2 32 22.67	19.334	9 52 16.6	83.17
5	1 1 42.30	19.411	2 40 23.4	98.72	5	2 34 18.70	19.343	10 0 34.2	82.72
6	1 3 38.73	19.399	2 50 15.1	98.51	6	2 36 14.79	19.352	10 8 49.2	82.27
7	1 5 35.09	19.388	3 0 5.5	98.29	7	2 38 10.92	19.361	10 17 1.4	81.80
8	1 7 31.38	19.377	3 9 54.6	98.07	8	2 40 7.12	19.371	10 25 10.8	81.33
9	1 9 27.61	19.367	3 19 42.3	97.85	9	2 42 3.37	19.380	10 33 17.4	80.87
10	1 11 23.78	19.356	3 29 28.8	97.63	10	2 43 59.68	19.390	10 41 21.2	80.40
11	1 13 19.88	19.346	3 39 13.8	97.38	11	2 45 56.05	19.401	10 49 22.2	79.92
12	1 15 15.93	19.338	3 48 57.3	97.14	12	2 47 52.49	19.413	10 57 20.2	79.43
13	1 17 11.93	19.328	3 58 39.5	96.90	13	2 49 49.00	19.423	11 5 15.4	78.95
14	1 19 7.87	19.320	4 8 20.1	96.63	14	2 51 45.57	19.435	11 13 7.6	78.45
15	1 21 3.77	19.313	4 17 59.1	96.38	15	2 53 42.22	19.448	11 20 56.8	77.96
16	1 22 59.62	19.305	4 27 36.6	96.12	16	2 55 38.94	19.460	11 28 43.1	77.46
17	1 24 55.43	19.298	4 37 12.5	95.85	17	2 57 35.74	19.473	11 36 26.3	76.94
18	1 26 51.20	19.292	4 46 46.8	95.58	18	2 59 32.62	19.486	11 44 6.4	76.43
19	1 28 46.93	19.286	4 56 19.4	95.29	19	3 1 29.57	19.499	11 51 43.5	75.93
20	1 30 42.63	19.281	5 5 50.3	95.01	20	3 3 26.61	19.513	11 59 17.5	75.40
21	1 32 38.30	19.276	5 15 19.5	94.72	21	3 5 23.73	19.527	12 6 48.3	74.88
22	1 34 33.94	19.271	5 24 46.9	94.42	22	3 7 20.93	19.541	12 14 16.0	74.35
23	1 36 29.55	19.266	N. 5 34 12.5	94.12	23	3 9 18.22	19.557	N. 12 21 40.5	73.81
SUNDAY 10.					TUESDAY 12.				
	h m s					h m s			
0	1 38 25.13	19.263	N. 5 43 36.3	93.81	0	3 11 15.61	19.572	N. 12 29 1.7	73.27
1	1 40 20.70	19.260	5 52 58.2	93.49	1	3 13 13.08	19.587	12 36 19.7	72.73
2	1 42 16.25	19.257	6 2 18.2	93.18	2	3 15 10.65	19.603	12 43 34.5	72.18
3	1 44 11.78	19.254	6 11 36.4	92.86	3	3 17 8.31	19.618	12 50 45.9	71.63
4	1 46 7.30	19.253	6 20 52.5	92.53	4	3 19 6.07	19.635	12 57 54.0	71.07
5	1 48 2.81	19.252	6 30 6.7	92.20	5	3 21 3.93	19.652	13 4 58.7	70.51
6	1 49 58.32	19.251	6 39 18.9	91.86	6	3 23 1.89	19.668	13 12 0.1	69.94
7	1 51 53.82	19.249	6 48 29.0	91.52	7	3 24 59.95	19.685	13 18 58.0	69.37
8	1 53 49.31	19.249	6 57 37.1	91.17	8	3 26 58.11	19.703	13 25 52.5	68.79
9	1 55 44.81	19.250	7 6 43.0	90.81	9	3 28 56.38	19.721	13 32 43.5	68.22
10	1 57 40.31	19.250	7 15 46.8	90.46	10	3 30 54.76	19.739	13 39 31.1	67.63
11	1 59 35.81	19.252	7 24 48.5	90.09	11	3 32 53.25	19.757	13 46 15.1	67.03
12	2 1 31.33	19.253	7 33 47.9	89.72	12	3 34 51.84	19.775	13 52 55.5	66.44
13	2 3 26.85	19.255	7 42 45.1	89.35	13	3 36 50.55	19.794	13 59 32.4	65.84
14	2 5 22.39	19.258	7 51 40.1	88.98	14	3 38 49.37	19.813	14 6 5.6	65.24
15	2 7 17.94	19.260	8 0 32.8	88.59	15	3 40 48.31	19.833	14 12 35.3	64.63
16	2 9 13.51	19.263	8 9 23.2	88.20	16	3 42 47.36	19.853	14 19 1.2	64.02
17	2 11 9.10	19.268	8 18 11.2	87.81	17	3 44 46.54	19.873	14 25 23.5	63.41
18	2 13 4.72	19.271	8 26 56.9	87.41	18	3 46 45.83	19.892	14 31 42.1	62.78
19	2 15 0.35	19.275	8 35 40.1	87.00	19	3 48 45.24	19.912	14 37 56.9	62.15
20	2 16 56.02	19.281	8 44 20.9	86.60	20	3 50 44.77	19.933	14 44 7.9	61.52
21	2 18 51.72	19.286	8 52 59.3	86.19	21	3 52 44.43	19.953	14 50 15.1	60.88
22	2 20 47.45	19.292	9 1 35.2	85.77	22	3 54 44.21	19.974	14 56 18.5	60.24
23	2 22 43.22	19.298	9 10 8.5	85.34	23	3 56 44.12	19.996	15 2 18.0	59.60
24	2 24 39.03	19.304	N. 9 18 39.3	84.93	24	3 58 44.16	20.017	N. 15 8 13.7	58.95

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
WEDNESDAY 13.					FRIDAY 15.				
	h m s	s	N. 15° 8' 13"	58.95		h m s	s	N. 18° 27' 33"	22.41
0	3 58 44.16	20.017	15 8 13.7	58.95	0	5 37 31.00	21.162	18 27 33.9	22.41
1	4 0 44.32	20.038	15 14 5.4	58.29	1	5 39 38.04	21.186	18 29 45.8	21.54
2	4 2 44.62	20.060	15 19 53.2	57.63	2	5 41 45.23	21.209	18 31 52.4	20.66
3	4 4 45.04	20.082	15 25 37.0	56.97	3	5 43 52.55	21.233	18 33 53.7	19.78
4	4 6 45.60	20.104	15 31 16.8	56.30	4	5 46 0.02	21.256	18 35 49.8	18.92
5	4 8 46.29	20.127	15 36 52.6	55.63	5	5 48 7.62	21.279	18 37 40.7	18.03
6	4 10 47.12	20.148	15 42 24.3	54.95	6	5 50 15.37	21.303	18 39 26.2	17.14
7	4 12 48.07	20.171	15 47 52.0	54.27	7	5 52 23.25	21.325	18 41 6.4	16.26
8	4 14 49.17	20.194	15 53 15.5	53.58	8	5 54 31.27	21.348	18 42 41.3	15.37
9	4 16 50.40	20.217	15 58 34.9	52.88	9	5 56 39.43	21.372	18 44 10.8	14.47
10	4 18 51.77	20.240	16 3 50.1	52.19	10	5 58 47.73	21.394	18 45 34.9	13.57
11	4 20 53.28	20.263	16 9 1.2	51.49	11	6 0 56.16	21.416	18 46 53.6	12.67
12	4 22 54.93	20.287	16 14 8.0	50.78	12	6 3 4.72	21.438	18 48 6.9	11.76
13	4 24 56.72	20.310	16 19 10.6	50.08	13	6 5 13.41	21.460	18 49 14.7	10.85
14	4 26 58.65	20.333	16 24 8.9	49.36	14	6 7 22.24	21.483	18 50 17.1	9.94
15	4 29 0.72	20.357	16 29 2.9	48.63	15	6 9 31.20	21.504	18 51 14.0	9.03
16	4 31 2.93	20.381	16 33 52.5	47.91	16	6 11 40.29	21.525	18 52 5.4	8.10
17	4 33 5.29	20.404	16 38 37.8	47.18	17	6 13 49.50	21.546	18 52 51.2	7.18
18	4 35 7.78	20.428	16 43 18.7	46.45	18	6 15 58.84	21.568	18 53 31.5	6.26
19	4 37 10.43	20.453	16 47 55.2	45.72	19	6 18 8.31	21.588	18 54 6.3	5.33
20	4 39 13.22	20.477	16 52 27.3	44.98	20	6 20 17.90	21.609	18 54 35.5	4.39
21	4 41 16.15	20.501	16 56 54.9	44.23	21	6 22 27.62	21.629	18 54 59.0	3.46
22	4 43 19.23	20.526	17 1 18.0	43.47	22	6 24 37.45	21.649	18 55 17.0	2.53
23	4 45 22.46	20.550	N. 17 5 36.5	42.72	23	6 26 47.41	21.670	N. 18 55 29.3	1.58
THURSDAY 14.					SATURDAY 16.				
	h m s	s	N. 17° 9' 50"	41.96		h m s	s	N. 18° 55' 36"	0.64
0	4 47 25.83	20.574	17 9 50.6	41.96	0	6 28 57.49	21.689	18 55 36.0	0.64
1	4 49 29.35	20.599	17 14 0.0	41.19	1	6 31 7.68	21.708	18 55 37.0	0.31
2	4 51 33.02	20.623	17 18 4.9	40.43	2	6 33 17.99	21.728	18 55 32.3	1.26
3	4 53 36.83	20.648	17 22 5.1	39.65	3	6 35 28.41	21.747	18 55 21.9	2.20
4	4 55 40.79	20.673	17 26 0.7	38.87	4	6 37 38.95	21.766	18 55 5.9	3.15
5	4 57 44.90	20.698	17 29 51.5	38.08	5	6 39 49.60	21.783	18 54 44.1	4.11
6	4 59 49.16	20.722	17 33 37.7	37.31	6	6 42 0.35	21.802	18 54 16.6	5.07
7	5 1 53.56	20.747	17 37 19.2	36.51	7	6 44 11.22	21.820	18 53 43.3	6.03
8	5 3 58.12	20.772	17 40 55.8	35.71	8	6 46 22.19	21.838	18 53 4.3	6.98
9	5 6 2.82	20.796	17 44 27.7	34.92	9	6 48 33.27	21.855	18 52 19.5	7.95
10	5 8 7.67	20.820	17 47 54.8	34.11	10	6 50 44.45	21.872	18 51 28.9	8.92
11	5 10 12.66	20.845	17 51 17.0	33.30	11	6 52 55.73	21.888	18 50 32.5	9.88
12	5 12 17.81	20.870	17 54 34.4	32.49	12	6 55 7.11	21.905	18 49 30.3	10.85
13	5 14 23.10	20.894	17 57 46.9	31.67	13	6 57 18.59	21.921	18 48 22.3	11.82
14	5 16 28.54	20.919	18 0 54.4	30.84	14	6 59 30.16	21.938	18 47 8.5	12.79
15	5 18 34.13	20.944	18 3 57.0	30.03	15	7 1 41.84	21.953	18 45 48.8	13.77
16	5 20 39.87	20.968	18 6 54.7	29.19	16	7 3 53.60	21.968	18 44 23.3	14.74
17	5 22 45.75	20.993	18 9 47.3	28.35	17	7 6 5.45	21.983	18 42 51.9	15.72
18	5 24 51.78	21.017	18 12 34.9	27.52	18	7 8 17.40	21.998	18 41 14.7	16.68
19	5 26 57.95	21.041	18 15 17.5	26.68	19	7 10 29.43	22.012	18 39 31.7	17.67
20	5 29 4.27	21.066	18 17 55.0	25.83	20	7 12 41.54	22.026	18 37 42.7	18.65
21	5 31 10.74	21.090	18 20 27.5	24.98	21	7 14 53.74	22.040	18 35 47.9	19.63
22	5 33 17.35	21.113	18 22 54.8	24.12	22	7 17 6.02	22.054	18 33 47.2	20.61
23	5 35 24.10	21.138	18 25 16.9	23.26	23	7 19 18.39	22.068	18 31 40.6	21.59
24	5 37 31.00	21.162	N. 18 27 33.9	22.41	24	7 21 30.83	22.079	N. 18 29 28.1	22.58

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
SUNDAY 17.					TUESDAY 19.				
	h m s	s				h m s	s		
0	7 21 30.83	22.079	N.18 29 28.1	22.58	0	9 8 22.85	22.338	N.14 49 27.2	68.26
1	7 23 43.34	22.092	18 27 9.7	23.56	1	9 10 36.87	22.336	14 42 35.0	69.13
2	7 25 55.93	22.104	18 24 45.4	24.53	2	9 12 50.88	22.334	14 35 37.6	70.00
3	7 28 8.59	22.117	18 22 15.3	25.52	3	9 15 4.88	22.333	14 28 35.0	70.87
4	7 30 21.33	22.128	18 19 39.2	26.51	4	9 17 18.88	22.333	14 21 27.2	71.73
5	7 32 34.13	22.138	18 16 57.2	27.48	5	9 19 32.87	22.330	14 14 14.3	72.58
6	7 34 46.99	22.150	18 14 9.4	28.47	6	9 21 46.84	22.328	14 6 56.3	73.42
7	7 36 59.93	22.161	18 11 15.6	29.46	7	9 24 0.80	22.326	13 59 33.3	74.26
8	7 39 12.92	22.171	18 8 15.9	30.44	8	9 26 14.75	22.324	13 52 5.2	75.10
9	7 41 25.98	22.181	18 5 10.3	31.42	9	9 28 28.69	22.322	13 44 32.1	75.93
10	7 43 39.09	22.190	18 1 58.9	32.40	10	9 30 42.61	22.319	13 36 54.1	76.75
11	7 45 52.26	22.200	17 58 41.5	33.38	11	9 32 56.52	22.317	13 29 11.1	77.57
12	7 48 5.49	22.209	17 55 18.3	34.37	12	9 35 10.41	22.314	13 21 23.3	78.38
13	7 50 18.77	22.218	17 51 49.1	35.35	13	9 37 24.29	22.312	13 13 30.6	79.18
14	7 52 32.10	22.226	17 48 14.1	36.33	14	9 39 38.15	22.308	13 5 33.1	79.98
15	7 54 45.48	22.233	17 44 33.2	37.31	15	9 41 51.99	22.305	12 57 30.8	80.78
16	7 56 58.90	22.242	17 40 46.4	38.28	16	9 44 5.81	22.302	12 49 23.8	81.55
17	7 59 12.38	22.249	17 36 53.8	39.26	17	9 46 19.61	22.299	12 41 12.2	82.33
18	8 1 25.89	22.256	17 32 55.3	40.23	18	9 48 33.40	22.296	12 32 55.9	83.11
19	8 3 39.45	22.263	17 28 51.0	41.20	19	9 50 47.16	22.292	12 24 34.9	83.87
20	8 5 53.05	22.270	17 24 40.9	42.18	20	9 53 0.90	22.288	12 16 9.5	84.62
21	8 8 6.69	22.276	17 20 24.9	43.15	21	9 55 14.62	22.285	12 7 39.5	85.38
22	8 10 20.36	22.281	17 16 3.1	44.12	22	9 57 28.32	22.282	11 59 5.0	86.11
23	8 12 34.06	22.287	N.17 11 35.5	45.08	23	9 59 42.00	22.278	N.11 50 26.2	86.84
MONDAY 18.					WEDNESDAY 20.				
	h m s	s				h m s	s		
0	8 14 47.80	22.293	N.17 7 2.1	46.04	0	10 1 55.66	22.274	N.11 41 42.9	87.58
1	8 17 1.57	22.297	17 2 23.0	47.01	1	10 4 9.29	22.270	11 32 55.3	88.29
2	8 19 15.36	22.301	16 57 38.0	47.98	2	10 6 22.90	22.267	11 24 3.4	89.00
3	8 21 29.18	22.306	16 52 47.3	48.93	3	10 8 36.49	22.263	11 15 7.3	89.70
4	8 23 43.03	22.311	16 47 50.9	49.88	4	10 10 50.06	22.259	11 6 7.0	90.39
5	8 25 56.91	22.314	16 42 48.8	50.83	5	10 13 3.60	22.255	10 57 2.6	91.08
6	8 28 10.80	22.317	16 37 40.9	51.78	6	10 15 17.12	22.252	10 47 54.0	91.77
7	8 30 24.71	22.321	16 32 27.4	52.73	7	10 17 30.62	22.248	10 38 41.4	92.43
8	8 32 38.65	22.324	16 27 8.2	53.67	8	10 19 44.09	22.244	10 29 24.8	93.09
9	8 34 52.60	22.326	16 21 43.4	54.61	9	10 21 57.55	22.241	10 20 4.3	93.74
10	8 37 6.56	22.328	16 16 12.9	55.55	10	10 24 10.98	22.237	10 10 39.9	94.39
11	8 39 20.54	22.331	16 10 36.8	56.48	11	10 26 24.39	22.233	10 1 11.6	95.03
12	8 41 34.53	22.333	16 4 55.1	57.42	12	10 28 37.78	22.229	9 51 39.6	95.65
13	8 43 48.53	22.334	15 59 7.8	58.34	13	10 30 51.14	22.226	9 42 3.8	96.28
14	8 46 2.54	22.336	15 53 15.0	59.26	14	10 33 4.49	22.223	9 32 24.3	96.88
15	8 48 16.56	22.338	15 47 16.7	60.18	15	10 35 17.81	22.219	9 22 41.2	97.48
16	8 50 30.59	22.338	15 41 12.9	61.10	16	10 37 31.12	22.216	9 12 54.5	98.08
17	8 52 44.62	22.338	15 35 3.5	62.01	17	10 39 44.40	22.212	9 3 4.3	98.65
18	8 54 58.65	22.339	15 28 48.8	62.91	18	10 41 57.66	22.209	8 53 10.7	99.23
19	8 57 12.69	22.340	15 22 28.6	63.82	19	10 44 10.91	22.207	8 43 13.6	99.79
20	8 59 26.73	22.339	15 16 3.0	64.72	20	10 46 24.14	22.203	8 33 13.2	100.34
21	9 1 40.76	22.338	15 9 32.0	65.61	21	10 48 37.35	22.200	8 23 9.5	100.89
22	9 3 54.79	22.338	15 2 55.7	66.49	22	10 50 50.54	22.198	8 13 2.5	101.43
23	9 6 8.82	22.338	14 56 14.1	67.38	23	10 53 3.72	22.195	8 2 52.4	101.95
24	9 8 22.85	22.338	N.14 49 27.2	68.26	24	10 55 16.88	22.193	N. 7 52 39.1	102.47

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10m.	Declination.	Var. in 10m.	Hour.	Right Ascension.	Var. in 10m.	Declination.	Var. in 10m.
THURSDAY 21.					SATURDAY 23.				
	h m s	s	N. ° ' "	"		h m s	s	S. ° ' "	"
0	10 55 16.88	22.193	N. 7 52 39.1	102.47	0	12 41 52.45	22.316	S. 0 58 34.0	114.60
1	10 57 30.03	22.190	7 42 22.8	102.97	1	12 44 6.37	22.325	1 10 1.5	114.57
2	10 59 43.16	22.188	7 32 3.5	103.47	2	12 46 20.35	22.336	1 21 28.8	114.53
3	11 1 56.28	22.185	7 21 41.2	103.95	3	12 48 34.40	22.346	1 32 55.9	114.48
4	11 4 9.38	22.183	7 11 16.1	104.43	4	12 50 48.50	22.355	1 44 22.5	114.41
5	11 6 22.48	22.182	7 0 48.1	104.90	5	12 53 2.66	22.366	1 55 48.8	114.35
6	11 8 35.56	22.179	6 50 17.3	105.35	6	12 55 16.89	22.377	2 7 14.7	114.26
7	11 10 48.63	22.178	6 39 43.9	105.79	7	12 57 31.18	22.388	2 18 39.9	114.15
8	11 13 1.70	22.178	6 29 7.8	106.23	8	12 59 45.55	22.400	2 30 4.5	114.04
9	11 15 14.76	22.176	6 18 29.1	106.65	9	13 1 59.98	22.411	2 41 28.4	113.93
10	11 17 27.81	22.174	6 7 48.0	107.07	10	13 4 14.48	22.423	2 52 51.6	113.79
11	11 19 40.85	22.173	5 57 4.3	107.48	11	13 6 29.06	22.437	3 4 13.9	113.64
12	11 21 53.89	22.173	5 46 18.3	107.87	12	13 8 43.72	22.449	3 15 35.3	113.48
13	11 24 6.93	22.173	5 35 29.9	108.25	13	13 10 58.45	22.462	3 26 55.6	113.31
14	11 26 19.97	22.173	5 24 39.3	108.62	14	13 13 13.26	22.475	3 38 15.0	113.13
15	11 28 33.01	22.173	5 13 46.5	108.98	15	13 15 28.15	22.488	3 49 33.2	112.93
16	11 30 46.04	22.173	5 2 51.5	109.33	16	13 17 43.12	22.503	4 0 50.2	112.73
17	11 32 59.08	22.173	4 51 54.5	109.67	17	13 19 58.18	22.518	4 12 6.0	112.51
18	11 35 12.12	22.174	4 40 55.5	110.00	18	13 22 13.33	22.532	4 23 20.3	112.28
19	11 37 25.17	22.175	4 29 54.5	110.32	19	13 24 28.56	22.547	4 34 33.3	112.04
20	11 39 38.22	22.176	4 18 51.7	110.63	20	13 26 43.89	22.562	4 45 44.8	111.78
21	11 41 51.28	22.178	4 7 47.0	110.93	21	13 28 59.30	22.577	4 56 54.7	111.52
22	11 44 4.35	22.179	3 56 40.6	111.21	22	13 31 14.81	22.593	5 8 3.0	111.24
23	11 46 17.43	22.181	N. 3 45 32.5	111.48	23	13 33 30.42	22.610	S. 5 19 9.6	110.95
FRIDAY 22.					SUNDAY 24.				
	h m s	s	N. ° ' "	"		h m s	s	S. ° ' "	"
0	11 48 30.52	22.183	N. 3 34 22.8	111.74	0	13 35 46.13	22.626	S. 5 30 14.4	110.65
1	11 50 43.62	22.185	3 23 11.6	111.98	1	13 38 1.93	22.642	5 41 17.4	110.34
2	11 52 56.74	22.188	3 11 59.0	112.23	2	13 40 17.83	22.659	5 52 18.5	110.02
3	11 55 9.88	22.191	3 0 44.9	112.47	3	13 42 33.84	22.678	6 3 17.6	109.68
4	11 57 23.03	22.193	2 49 29.4	112.68	4	13 44 49.96	22.694	6 14 14.6	109.33
5	11 59 36.20	22.198	2 38 12.7	112.88	5	13 47 6.17	22.712	6 25 9.5	108.97
6	12 1 49.40	22.201	2 26 54.8	113.08	6	13 49 22.50	22.730	6 36 2.2	108.59
7	12 4 2.61	22.204	2 15 35.8	113.26	7	13 51 38.93	22.748	6 46 52.6	108.21
8	12 6 15.85	22.209	2 4 15.7	113.43	8	13 53 55.47	22.767	6 57 40.7	107.81
9	12 8 29.12	22.213	1 52 54.6	113.59	9	13 56 12.13	22.786	7 8 26.3	107.40
10	12 10 42.41	22.218	1 41 32.6	113.74	10	13 58 28.90	22.805	7 19 9.5	106.98
11	12 12 55.74	22.223	1 30 9.7	113.88	11	14 0 45.79	22.824	7 29 50.1	106.55
12	12 15 9.09	22.228	1 18 46.0	114.00	12	14 3 2.79	22.843	7 40 28.1	106.12
13	12 17 22.48	22.234	1 7 21.7	114.12	13	14 5 19.91	22.863	7 51 3.5	105.66
14	12 19 35.90	22.240	0 55 56.6	114.23	14	14 7 37.15	22.883	8 1 36.0	105.18
15	12 21 49.36	22.247	0 44 31.0	114.31	15	14 9 54.51	22.904	8 12 5.7	104.71
16	12 24 2.86	22.253	0 33 4.9	114.39	16	14 12 12.00	22.924	8 22 32.5	104.23
17	12 26 16.40	22.260	0 21 38.3	114.46	17	14 14 29.60	22.945	8 32 56.4	103.73
18	12 28 29.98	22.267	N. 0 10 11.4	114.51	18	14 16 47.34	22.967	8 43 17.2	103.21
19	12 30 43.60	22.274	S. 0 1 15.8	114.56	19	14 19 5.20	22.987	8 53 34.9	102.68
20	12 32 57.27	22.283	0 12 43.3	114.59	20	14 21 23.18	23.008	9 3 49.4	102.15
21	12 35 10.99	22.291	0 24 10.9	114.61	21	14 23 41.29	23.030	9 14 0.7	101.61
22	12 37 24.76	22.299	0 35 38.6	114.62	22	14 25 59.54	23.052	9 24 8.7	101.04
23	12 39 38.58	22.308	0 47 6.3	114.62	23	14 28 17.91	23.073	9 34 13.2	100.48
24	12 41 52.45	22.316	S. 0 58 34.0	114.60	24	14 30 36.42	23.096	S. 9 44 14.4	99.90

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
MONDAY 25.					WEDNESDAY 27.				
	h m s	s	S. ° ' "	"		h m s	s	S. ° ' "	"
0	14 30 36.42	23.096	S. 9 44 14.4	99.90	0	16 24 7.65	24.183	S. 16 16 56.5	60.03
1	14 32 55.06	23.118	9 54 12.0	99.31	1	16 26 32.80	24.202	16 22 53.6	58.99
2	14 35 13.83	23.140	10 4 6.1	98.71	2	16 28 58.07	24.221	16 28 44.4	57.93
3	14 37 32.74	23.163	10 13 56.5	98.09	3	16 31 23.45	24.239	16 34 28.8	56.87
4	14 39 51.78	23.185	10 23 43.2	97.47	4	16 33 48.94	24.258	16 40 6.8	55.81
5	14 42 10.96	23.208	10 33 26.1	96.83	5	16 36 14.54	24.275	16 45 38.5	54.73
6	14 44 30.28	23.231	10 43 5.1	96.18	6	16 38 40.24	24.292	16 51 3.6	53.65
7	14 46 49.73	23.254	10 52 40.3	95.53	7	16 41 6.04	24.308	16 56 22.3	52.57
8	14 49 9.33	23.278	11 2 11.4	94.86	8	16 43 31.94	24.326	17 1 34.4	51.47
9	14 51 29.06	23.300	11 11 38.6	94.18	9	16 45 57.95	24.342	17 6 39.9	50.37
10	14 53 48.93	23.324	11 21 1.6	93.49	10	16 48 24.04	24.357	17 11 38.8	49.26
11	14 56 8.95	23.348	11 30 20.5	92.79	11	16 50 50.23	24.373	17 16 31.0	48.15
12	14 58 29.10	23.371	11 39 35.1	92.08	12	16 53 16.51	24.388	17 21 16.6	47.03
13	15 0 49.40	23.394	11 48 45.4	91.35	13	16 55 42.88	24.402	17 25 55.4	45.91
14	15 3 9.83	23.418	11 57 51.3	90.63	14	16 58 9.33	24.416	17 30 27.5	44.78
15	15 5 30.41	23.442	12 6 52.9	89.88	15	17 0 35.87	24.429	17 34 52.8	43.65
16	15 7 51.13	23.465	12 15 49.9	89.13	16	17 3 2.48	24.442	17 39 11.3	42.51
17	15 10 11.99	23.489	12 24 42.4	88.37	17	17 5 29.17	24.455	17 43 22.9	41.36
18	15 12 33.00	23.513	12 33 30.3	87.59	18	17 7 55.94	24.467	17 47 27.6	40.22
19	15 14 54.15	23.537	12 42 13.5	86.81	19	17 10 22.77	24.478	17 51 25.5	39.07
20	15 17 15.44	23.560	12 50 52.0	86.01	20	17 12 49.68	24.489	17 55 16.4	37.91
21	15 19 36.87	23.584	12 59 25.6	85.20	21	17 15 16.64	24.499	17 59 0.4	36.74
22	15 21 58.45	23.608	13 7 54.5	84.40	22	17 17 43.67	24.509	18 2 37.3	35.58
23	15 24 20.17	23.632	S. 13 16 18.4	83.57	23	17 20 10.75	24.518	S. 18 6 7.3	34.41
TUESDAY 26.					THURSDAY 28.				
	h m s	s	S. ° ' "	"		h m s	s	S. ° ' "	"
0	15 26 42.03	23.655	S. 13 24 37.3	82.74	0	17 22 37.89	24.528	S. 18 9 30.2	33.23
1	15 29 4.03	23.678	13 32 51.3	81.90	1	17 25 5.08	24.536	18 12 46.1	32.06
2	15 31 26.17	23.703	13 41 0.1	81.04	2	17 27 32.32	24.544	18 15 54.9	30.88
3	15 33 48.46	23.726	13 49 3.8	80.18	3	17 29 59.61	24.551	18 18 56.6	29.69
4	15 36 10.88	23.749	13 57 2.3	79.31	4	17 32 26.93	24.557	18 21 51.2	28.51
5	15 38 33.45	23.773	14 4 55.5	78.43	5	17 34 54.29	24.563	18 24 38.7	27.32
6	15 40 56.16	23.796	14 12 43.5	77.54	6	17 37 21.69	24.568	18 27 19.0	26.12
7	15 43 19.00	23.818	14 20 26.0	76.63	7	17 39 49.11	24.573	18 29 52.1	24.93
8	15 45 41.98	23.842	14 28 3.1	75.73	8	17 42 16.57	24.578	18 32 18.1	23.73
9	15 48 5.10	23.865	14 35 34.8	74.82	9	17 44 44.04	24.581	18 34 36.9	22.53
10	15 50 28.36	23.888	14 43 0.9	73.88	10	17 47 11.54	24.584	18 36 48.4	21.33
11	15 52 51.75	23.910	14 50 21.4	72.95	11	17 49 39.05	24.587	18 38 52.8	20.13
12	15 55 15.28	23.933	14 57 36.3	72.00	12	17 52 6.58	24.588	18 40 49.9	18.91
13	15 57 38.94	23.954	15 4 45.4	71.05	13	17 54 34.11	24.589	18 42 39.7	17.71
14	16 0 2.73	23.977	15 11 48.9	70.09	14	17 57 1.65	24.590	18 44 22.4	16.50
15	16 2 26.66	23.998	15 18 46.5	69.12	15	17 59 29.19	24.589	18 45 57.7	15.28
16	16 4 50.71	24.019	15 25 38.3	68.14	16	18 1 56.72	24.588	18 47 25.8	14.08
17	16 7 14.89	24.041	15 32 24.2	67.16	17	18 4 24.25	24.588	18 48 46.6	12.87
18	16 9 39.20	24.063	15 39 4.2	66.16	18	18 6 51.77	24.586	18 50 0.2	11.66
19	16 12 3.64	24.083	15 45 38.1	65.16	19	18 9 19.28	24.583	18 51 6.5	10.44
20	16 14 28.20	24.103	15 52 6.1	64.15	20	18 11 46.77	24.579	18 52 5.5	9.23
21	16 16 52.88	24.124	15 58 27.9	63.13	21	18 14 14.23	24.575	18 52 57.2	8.01
22	16 19 17.69	24.144	16 4 43.6	62.11	22	18 16 41.67	24.570	18 53 41.6	6.80
23	16 21 42.61	24.163	16 10 53.2	61.08	23	18 19 9.07	24.564	18 54 18.8	5.59
24	16 24 7.65	24.183	S. 16 16 56.5	60.03	24	18 21 36.44	24.559	S. 18 54 48.7	4.38

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	
FRIDAY 29.					
	^h ^m ^s	^s	^s	^s	
0	18 21 36.44	24.559	S. 18 54 48.7	4.38	
1	18 24 3.78	24.553	18 55 11.3	3.16	
2	18 26 31.07	24.545	18 55 26.6	1.95	
3	18 28 58.32	24.537	18 55 34.7	0.74	
4	18 31 25.51	24.528	18 55 35.5	0.47	
5	18 33 52.65	24.519	18 55 29.1	1.68	
6	18 36 19.74	24.509	18 55 15.4	2.88	
7	18 38 46.76	24.498	18 54 54.5	4.08	
8	18 41 13.71	24.487	18 54 26.4	5.28	
9	18 43 40.60	24.475	18 53 51.1	6.49	
10	18 46 7.41	24.463	18 53 8.5	7.69	
11	18 48 34.15	24.449	18 52 18.8	8.88	
12	18 51 0.80	24.435	18 51 21.9	10.08	
13	18 53 27.37	24.421	18 50 17.9	11.26	
14	18 55 53.85	24.406	18 49 6.8	12.45	
15	18 58 20.24	24.390	18 47 48.5	13.64	
16	19 0 46.53	24.373	18 46 23.1	14.82	
17	19 3 12.72	24.356	18 44 50.7	15.99	
18	19 5 38.80	24.338	18 43 11.2	17.18	
19	19 8 4.78	24.321	18 41 24.6	18.34	
20	19 10 30.65	24.302	18 39 31.1	19.50	
21	19 12 56.40	24.283	18 37 30.6	20.67	
22	19 15 22.04	24.263	18 35 23.1	21.83	
23	19 17 47.55	24.241	S. 18 33 8.7	22.98	
SATURDAY, MARCH 1.					
0	19 20 12.93	24.220	S. 18 30 47.4	24.13	

PHASES OF THE MOON.				
Feb. 4	● New Moon	- -	^h ^m	13 38.3
12	☾ First Quarter	- -	8	9.0
20	○ Full Moon	- -	4	7.2
27	☾ Last Quarter	- -	1	15.2
Feb. 12	☾ Apogee	- - - -	^h	13.7
25	☾ Perigee	- - - -		.3.9

AT APPARENT NOON.

Date.	THE SUN'S				Sidereal Time of the Semi- diameter passing the Meridian.*	Equation of Time, to be added to Apparent Time.	Var. in 1 hour.
	Apparent Right Ascension.	Var. in 1 hour.	Apparent Declination.	Var. in 1 hour.			
	h m s	s	° ' "	"	m s	m s	s
Sat.	1 22 48 35.53	9 367	N. 7 34 24.0	56.99	1 5.39	12 30.47	0.488
Sun.	2 22 52 20.08	9 346	7 11 33.0	57.25	1 5.31	12 18.51	0.508
Mon.	3 22 56 4.16	9 327	6 48 35.9	57.50	1 5.24	12 6.07	0.528
Tues.	4 22 59 47.78	9 308	6 25 32.9	57.74	1 5.18	11 53.16	0.547
Wed.	5 23 3 30.94	9 289	6 2 24.6	57.95	1 5.11	11 39.81	0.565
Thur.	6 23 7 13.67	9 272	5 39 11.3	58.15	1 5.05	11 26.03	0.583
Frid.	7 23 10 55.98	9 255	5 15 53.5	58.33	1 4.99	11 11.82	0.600
Sat.	8 23 14 37.89	9 238	4 52 31.5	58.49	1 4.93	10 57.22	0.616
Sun.	9 23 18 19.41	9 222	4 29 5.8	58.64	1 4.88	10 42.23	0.632
Mon.	10 23 22 0.56	9 207	4 5 36.8	58.77	1 4.83	10 26.87	0.647
Tues.	11 23 25 41.36	9 193	3 42 4.7	58.89	1 4.78	10 11.16	0.661
Wed.	12 23 29 21.83	9 180	3 18 30.1	58.99	1 4.74	9 55.13	0.675
Thur.	13 23 33 1.99	9 167	2 54 53.3	59.07	1 4.69	9 38.78	0.687
Frid.	14 23 36 41.86	9 155	2 31 14.6	59.14	1 4.66	9 22.14	0.699
Sat.	15 23 40 21.45	9 144	2 7 34.6	59.19	1 4.62	9 5.23	0.710
Sun.	16 23 44 0.79	9 135	1 43 53.4	59.23	1 4.59	8 48.06	0.720
Mon.	17 23 47 39.91	9 125	1 20 11.5	59.25	1 4.56	8 30.67	0.729
Tues.	18 23 51 18.81	9 117	0 56 29.3	59.26	1 4.53	8 13.08	0.737
Wed.	19 23 54 57.54	9 110	0 32 47.1	59.25	1 4.51	7 55.30	0.744
Thur.	20 23 58 36.10	9 104	N. 0 9 5.3	59.23	1 4.49	7 37.36	0.750
Frid.	21 0 2 14.53	9 099	N. 0 14 35.8	59.19	1 4.47	7 19.28	0.755
Sat.	22 0 5 52.85	9 095	0 38 15.9	59.14	1 4.45	7 1.10	0.759
Sun.	23 0 9 31.08	9 092	1 1 54.7	59.08	1 4.44	6 42.84	0.762
Mon.	24 0 13 9.26	9 090	1 25 31.7	59.00	1 4.43	6 24.51	0.764
Tues.	25 0 16 47.40	9 089	1 49 6.7	58.91	1 4.42	6 6.15	0.766
Wed.	26 0 20 25.53	9 089	2 12 39.3	58.80	1 4.42	5 47.77	0.766
Thur.	27 0 24 3.66	9 090	2 36 9.2	58.68	1 4.41	5 29.41	0.765
Frid.	28 0 27 41.83	9 091	2 59 36.1	58.55	1 4.42	5 11.07	0.763
Sat.	29 0 31 20.05	9 094	3 22 59.5	58.40	1 4.43	4 52.79	0.760
Sun.	30 0 34 58.33	9 097	3 46 19.1	58.23	1 4.44	4 34.57	0.757
Mon.	31 0 38 36.70	9 101	4 9 34.6	58.05	1 4.45	4 16.44	0.754
Tues.	32 0 42 15.17	9 105	N. 4 32 45.6	57.86	1 4.46	3 58.40	0.749

* Mean Time of the Semidiameter passing may be found by subtracting 0.18 from the Sidereal Time.

AT MEAN NOON.

Date.		THE SUN'S			Equation of Time, to be added to Apparent Time.	Sidereal Time.
		Apparent Right Ascension.	Apparent Declination.	Semi- diameter.*		
		h m s	° ' "	' "	m s	h m s
Sat.	1	22 48 33.58	S. 7 34 35.9	16 9.73	12 30.57	22 36 3.00
Sun.	2	22 52 18.17	7 11 44.8	16 9.48	12 18.61	22 39 59.55
Mon.	3	22 56 2.28	6 48 47.5	16 9.23	12 6.17	22 43 56.11
Tues.	4	22 59 45.93	6 25 44.4	16 8.98	11 53.27	22 47 52.66
Wed.	5	23 3 29.13	6 2 35.9	16 8.73	11 39.92	22 51 49.21
Thur.	6	23 7 11.90	5 39 22.4	16 8.48	11 26.14	22 55 45.76
Frid.	7	23 10 54.25	5 16 4.4	16 8.22	11 11.94	22 59 42.32
Sat.	8	23 14 36.20	4 52 42.2	16 7.97	10 57.33	23 3 38.87
Sun.	9	23 18 17.76	4 29 16.3	16 7.72	10 42.34	23 7 35.42
Mon.	10	23 21 58.95	4 5 47.0	16 7.46	10 26.98	23 11 31.97
Tues.	11	23 25 39.80	3 42 14.7	16 7.21	10 11.28	23 15 28.52
Wed.	12	23 29 20.31	3 18 39.9	16 6.95	9 55.24	23 19 25.08
Thur.	13	23 33 0.52	2 55 2.8	16 6.69	9 38.89	23 23 21.63
Frid.	14	23 36 40.43	2 31 23.9	16 6.43	9 22.25	23 27 18.18
Sat.	15	23 40 20.07	2 7 43.5	16 6.17	9 5.34	23 31 14.73
Sun.	16	23 43 59.45	1 44 2.1	16 5.90	8 48.17	23 35 11.28
Mon.	17	23 47 38.61	1 20 20.0	16 5.64	8 30.78	23 39 7.83
Tues.	18	23 51 17.56	0 56 37.5	16 5.37	8 13.18	23 43 4.38
Wed.	19	23 54 56.33	0 32 55.0	16 5.10	7 55.40	23 47 0.94
Thur.	20	23 58 34.94	S. 0 9 12.8	16 4.83	7 37.45	23 50 57.49
Frid.	21	0 2 13.42	N. 0 14 28.6	16 4.56	7 19.38	23 54 54.04
Sat.	22	0 5 51.78	0 38 9.0	16 4.28	7 1.19	23 58 50.59
Sun.	23	0 9 30.06	1 1 48.1	16 4.00	6 42.92	0 2 47.14
Mon.	24	0 13 8.29	1 25 25.4	16 3.72	6 24.59	0 6 43.70
Tues.	25	0 16 46.47	1 49 0.7	16 3.44	6 6.22	0 10 40.25
Wed.	26	0 20 24.65	2 12 33.7	16 3.16	5 47.85	0 14 36.80
Thur.	27	0 24 2.83	2 36 3.9	16 2.88	5 29.48	0 18 33.35
Frid.	28	0 27 41.04	2 59 31.0	16 2.59	5 11.14	0 22 29.90
Sat.	29	0 31 19.31	3 22 54.7	16 2.31	4 52.85	0 26 26.46
Sun.	30	0 34 57.64	3 46 14.7	16 2.03	4 34.63	0 30 23.01
Mon.	31	0 38 36.05	4 9 30.5	16 1.74	4 16.49	0 34 19.56
Tues.	32	0 42 14.57	N. 4 32 41.8	16 1.46	3 58.45	0 38 16.11

* The Semidiameter for *Apparent* Noon may be assumed the same as that for *Mean* Noon.

MEAN TIME.

Day.	THE SUN'S		Logarithm of the Radius Vector of the Earth.	Transit of the First Point of Aries.	THE MOON'S			
	Apparent				Semidiameter.		Horizontal Parallax.	
	Longitude.	Latitude.						
	Noon.	Noon.	Noon.		Noon.	Midnight.	Noon.	Midnight.
				h m s				
1	340° 38' 51.4	N. 0.67	9.9961558	1 23 43.25	15 55.56	15 52.59	58 27.03	58 16.12
2	341 39 2.7	0.56	.9962669	1 19 47.34	15 49.36	15 45.89	58 4.29	57 51.55
3	342 39 12.4	0.43	.9963786	1 15 51.43	15 42.18	15 38.24	57 37.92	57 23.48
4	343 39 20.4	0.29	9.9964908	1 11 55.53	15 34.11	15 29.81	57 8.31	56 52.53
5	344 39 26.6	0.16	.9966034	1 7 59.62	15 25.39	15 20.91	56 36.32	56 19.86
6	345 39 31.0	N. 0.04	.9967163	1 4 3.71	15 16.42	15 11.98	56 3.37	55 47.10
7	346 39 33.4	S. 0.08	9.9968296	1 0 7.81	15 7.67	15 3.56	55 31.29	55 16.21
8	347 39 33.8	0.18	.9969433	0 56 11.90	14 59.73	14 56.23	55 2.12	54 49.28
9	348 39 32.2	0.25	.9970574	0 52 16.00	14 53.14	14 50.52	54 37.94	54 28.33
10	349 39 28.4	0.30	9.9971719	0 48 20.09	14 48.43	14 46.92	54 20.66	54 15.12
11	350 39 22.5	0.32	.9972869	0 44 24.18	14 46.04	14 45.81	54 11.88	54 11.06
12	351 39 14.4	0.32	.9974025	0 40 28.28	14 46.27	14 47.44	54 12.75	54 17.04
13	352 39 4.1	0.29	9.9975186	0 36 32.37	14 49.33	14 51.93	54 23.97	54 33.51
14	353 38 51.6	0.22	.9976354	0 32 36.47	14 55.22	14 59.20	54 45.60	55 0.18
15	354 38 36.8	0.14	.9977529	0 28 40.56	15 3.80	15 8.99	55 17.08	55 36.11
16	355 38 19.8	S. 0.04	9.9978711	0 24 44.65	15 14.69	15 20.82	55 57.03	56 19.53
17	356 38 0.5	N. 0.08	.9979903	0 20 48.75	15 27.28	15 33.96	56 43.25	57 7.77
18	357 37 39.0	0.21	.9981104	0 16 52.84	15 40.74	15 47.46	57 32.63	57 57.32
19	358 37 15.3	0.35	9.9982315	0 12 56.94	15 54.00	16 0.21	58 21.33	58 44.11
20	359 36 49.5	0.48	.9983536	0 9 1.03	16 5.94	16 11.06	59 5.13	59 23.92
21	0 36 21.6	0.61	.9984768	0 5 5.12	16 15.45	16 19.03	59 40.05	59 53.17
22	1 35 51.7	0.71	9.9986011	^{0 1 9.22} _{23 57 13 31}	16 21.72	16 23.48	60 3.04	60 9.52
23	2 35 19.9	0.79	.9987264	23 53 17.41	16 24.32	16 24.26	60 12.61	60 12.38
24	3 34 46.2	0.84	.9988525	23 49 21.50	16 23.35	16 21.66	60 9.02	60 2.82
25	4 34 10.7	0.86	9.9989793	23 45 25.59	16 19.28	16 16.32	59 54.10	59 43.22
26	5 33 33.5	0.85	.9991067	23 41 29.69	16 12.87	16 9.05	59 30.58	59 16.54
27	6 32 54.5	0.81	.9992345	23 37 33.78	16 4.93	16 0.62	59 1.45	58 45.62
28	7 32 13.7	0.73	9.9993625	23 33 37.88	15 56.18	15 51.68	58 29.33	58 12.81
29	8 31 31.2	0.63	.9994905	23 29 41.97	15 47.16	15 42.67	57 56.23	57 39.72
30	9 30 47.0	0.50	.9996184	23 25 46.06	15 38.22	15 33.84	57 23.40	57 7.32
31	10 30 0.9	0.37	.9997460	23 21 50.16	15 29.54	15 25.33	56 51.54	56 36.09
32	11 29 13.0	N. 0.24	9.9998732	23 17 54.25	15 21.21	15 17.20	56 20.98	56 6.25

MEAN TIME.

THE MOON'S							
Day.	Longitude.		Latitude.		Age.	Meridian Passage.	
	Noon.	Midnight.	Noon.	Midnight.	Noon.	Upper.	Lower.
					d	h m	h m
1	289° 0' 52.5	295° 53' 53.9	N. 3° 37' 10.0	N. 3° 7' 54.7	25.43	21 32.2	9 4.6
2	302 44 14.3	309 31 43.3	2 36 8.7	2 2 23.1	26.43	22 25.9	9 59.3
3	316 16 11.2	322 57 28.8	1 27 9.7	N. 0 51 1.0	27.43	23 17.1	10 51.8
4	329 35 27.9	336 10 1.1	N. 0 14 29.1	S. 0 21 54.9	28.43	* *	11 41.9
5	342 41 2.8	349 8 29.4	S. 0 57 41.2	1 32 22.1	29.43	0 6.0	12 29.6
6	355 32 19.0	1 52 32.8	2 5 32.4	2 36 49.4	0.84	0 52.8	13 15.6
7	8 9 14.7	14 22 31.4	3 5 53.3	3 32 27.3	1.84	1 38.1	14 0.3
8	20 32 32.7	26 39 31.9	3 56 17.4	4 17 12.0	2.84	2 22.4	14 44.4
9	32 43 45.3	38 45 32.4	4 35 2.2	4 49 41.2	3.84	3 6.4	15 28.4
10	44 45 15.8	50 43 20.4	5 1 4.2	5 9 7.7	4.84	3 50.5	16 12.8
11	56 40 14.2	62 36 27.4	5 13 49.9	5 15 9.9	5.84	4 35.4	16 58.2
12	68 32 31.7	74 29 1.0	5 13 7.8	5 7 44.6	6.84	5 21.2	17 44.6
13	80 26 30.0	86 25 34.4	4 59 2.0	4 47 2.5	7.84	6 8.3	18 32.3
14	92 26 50.0	98 30 52.7	4 31 49.7	4 13 28.0	8.84	6 56.7	19 21.3
15	104 38 17.4	110 49 37.3	3 52 3.5	3 27 43.7	9.84	7 46.1	20 11.2
16	117 5 23.9	123 26 5.3	3 0 38.2	2 30 59.3	10.84	8 36.4	21 1.8
17	129 52 5.9	136 23 45.2	1 59 2.2	1 25 5.1	11.84	9 27.3	21 52.9
18	143 1 17.0	149 44 48.8	S. 0 49 30.3	S. 0 12 43.8	12.84	10 18.6	22 44.3
19	156 34 20.0	163 29 42.2	N. 0 24 44.7	N. 1 2 21.5	13.84	11 10.1	23 36.0
20	170 30 38.5	177 36 43.6	1 39 30.0	2 15 31.4	14.84	12 2.0	* *
21	184 47 23.6	192 1 57.5	2 49 45.6	3 21 32.8	15.84	12 54.6	0 28.2
22	199 19 37.3	206 39 31.0	3 50 15.1	4 15 17.8	16.84	13 48.2	1 21.2
23	214 0 43.6	221 22 19.5	4 36 11.1	4 52 30.8	17.84	14 43.2	2 15.5
24	228 43 24.8	236 3 9.1	5 3 59.9	5 10 28.2	18.84	15 39.6	3 11.2
25	243 20 47.1	250 35 40.1	5 11 52.6	5 8 16.9	19.84	16 37.1	4 8.2
26	257 47 16.7	264 55 12.6	4 59 51.0	4 46 50.2	20.84	17 35.0	5 6.0
27	271 59 11.4	278 59 2.8	4 29 34.0	4 8 25.4	21.84	18 32.3	6 3.8
28	285 54 43.1	292 46 13.3	3 43 50.2	3 16 15.9	22.84	19 28.1	7 0.5
29	299 33 38.1	306 17 5.3	2 46 11.3	2 14 5.7	23.84	20 21.7	7 55.2
30	312 56 44.6	319 32 46.4	1 40 28.9	N. 1 5 50.3	24.84	21 12.7	8 47.5
31	326 5 21.5	332 34 40.5	N. 0 30 38.9	S. 0 4 37.3	25.84	22 1.4	9 37.3
32	339 0 53.1	345 24 8.1	S. 0 39 30.9	S. 1 13 36.4	26.84	22 48.1	10 24.9

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
SATURDAY 1.					MONDAY 3.				
	h m s	s	S. 18° 30' 47".	24.13		h m s	s	S. 14° 34' 42".	71.25
0	19 20 12.93	24.220	18 28 15.2	25.28	0	21 13 7.12	22.688	14 27 33.1	72.02
1	19 22 38.19	24.198	18 25 44.1	26.42	1	21 15 23.13	22.648	14 20 18.7	72.78
2	19 25 3.31	24.176	18 23 2.2	27.54	2	21 17 38.90	22.610	14 12 59.7	73.54
3	19 27 28.30	24.153	18 20 13.6	28.67	3	21 19 54.45	22.572	14 5 36.2	74.29
4	19 29 53.15	24.130	18 17 18.2	29.80	4	21 22 9.76	22.533	13 58 8.2	75.02
5	19 32 17.86	24.106	18 14 16.0	30.92	5	21 24 24.84	22.494	13 50 36.0	75.73
6	19 34 42.42	24.081	18 11 7.2	32.02	6	21 26 39.69	22.456	13 42 59.4	76.46
7	19 37 6.83	24.056	18 7 51.7	33.13	7	21 28 54.31	22.417	13 35 18.5	77.17
8	19 39 31.09	24.030	18 4 29.6	34.23	8	21 31 8.69	22.378	13 27 33.4	77.86
9	19 41 55.19	24.003	17 57 25.7	35.33	9	21 33 22.84	22.339	13 19 44.2	78.53
10	19 44 19.13	23.977	17 53 43.9	36.42	10	21 35 36.76	22.301	13 11 51.0	79.21
11	19 46 42.91	23.950	17 49 55.7	37.50	11	21 37 50.45	22.262	13 3 53.7	79.88
12	19 49 6.53	23.923	17 46 1.1	38.57	12	21 40 3.90	22.223	12 55 52.4	80.53
13	19 51 29.98	23.894	17 42 0.0	39.64	13	21 42 17.12	22.184	12 47 47.3	81.18
14	19 53 53.26	23.866	17 37 52.6	40.71	14	21 44 30.11	22.146	12 39 38.3	81.82
15	19 56 16.37	23.837	17 33 38.9	41.76	15	21 46 42.87	22.107	12 31 25.5	82.43
16	19 58 39.30	23.807	17 29 19.0	42.80	16	21 48 55.39	22.068	12 23 9.1	83.05
17	20 1 2.05	23.777	17 24 52.8	43.84	17	21 51 7.68	22.029	12 14 48.9	83.66
18	20 3 24.62	23.747	17 20 20.4	44.88	18	21 53 19.74	21.991	12 6 25.2	84.24
19	20 5 47.01	23.716	17 15 41.9	45.91	19	21 55 31.57	21.953	11 57 58.0	84.83
20	20 8 9.21	23.684	17 10 57.3	46.93	20	21 57 43.18	21.915	11 49 27.2	85.41
21	20 10 31.22	23.653	16 6 6.7	48.93	21	21 59 54.55	21.876	11 40 53.1	85.98
22	20 12 53.04	23.621			22	22 2 5.69	21.838	11 32 15.5	86.53
23	20 15 14.67	23.588			23	22 4 16.61	21.801		
SUNDAY 2.					TUESDAY 4.				
	h m s	s	S. 17° 1 10.1	49.93		h m s	s	S. 11° 23 34.7	87.07
0	20 17 36.10	23.555	16 56 7.5	50.93	0	22 6 27.30	21.763	11 14 50.7	87.60
1	20 19 57.33	23.523	16 50 59.0	51.90	1	22 8 37.76	21.724	11 6 3.5	88.13
2	20 22 18.37	23.489	16 45 44.7	52.88	2	22 10 47.99	21.687	10 57 13.2	88.64
3	20 24 39.20	23.455	16 40 24.5	53.84	3	22 12 58.00	21.650	10 48 19.8	89.15
4	20 26 59.83	23.421	16 34 58.6	54.79	4	22 15 7.79	21.613	10 39 23.4	89.64
5	20 29 20.25	23.387	16 29 27.0	55.73	5	22 17 17.35	21.575	10 30 24.1	90.12
6	20 31 40.47	23.352	16 23 49.8	56.68	6	22 19 26.69	21.538	10 21 22.0	90.59
7	20 34 0.47	23.317	16 18 6.9	57.61	7	22 21 35.81	21.502	10 12 17.0	91.07
8	20 36 20.27	23.282	16 12 18.5	58.53	8	22 23 44.71	21.465	10 3 9.2	91.52
9	20 38 39.85	23.246	16 6 24.6	59.43	9	22 25 53.39	21.429	9 53 58.8	91.96
10	20 40 59.22	23.210	16 0 25.3	60.34	10	22 28 1.86	21.393	9 44 45.7	92.39
11	20 43 18.37	23.173	15 54 20.5	61.23	11	22 30 10.10	21.356	9 35 30.1	92.82
12	20 45 37.30	23.138	15 48 10.5	62.12	12	22 32 18.13	21.321	9 26 11.9	93.23
13	20 47 56.02	23.101	15 41 55.1	63.00	13	22 34 25.95	21.285	9 16 51.3	93.63
14	20 50 14.51	23.064	15 35 34.5	63.86	14	22 36 33.55	21.250	9 7 28.3	94.03
15	20 52 32.79	23.028	15 29 8.8	64.72	15	22 38 40.95	21.215	8 58 3.0	94.41
16	20 54 50.84	22.990	15 22 37.9	65.58	16	22 40 48.13	21.180	8 48 35.4	94.79
17	20 57 8.67	22.952	15 16 1.9	66.42	17	22 42 55.11	21.145	8 39 5.5	95.16
18	20 59 26.27	22.915	15 9 20.9	67.24	18	22 45 1.87	21.110	8 29 33.5	95.51
19	21 1 43.65	22.878	15 2 35.0	68.06	19	22 47 8.43	21.077	8 19 59.4	95.86
20	21 4 0.80	22.839	14 55 44.2	68.88	20	22 49 14.79	21.043	8 10 23.2	96.20
21	21 6 17.72	22.802	14 48 48.5	69.68	21	22 51 20.95	21.009	8 0 45.0	96.52
22	21 8 34.42	22.763	14 41 48.1	70.47	22	22 53 26.90	20.976	7 51 5.0	96.83
23	21 10 50.88	22.725			23	22 55 32.66	20.943	7 41 23.0	97.15
24	21 13 7.12	22.688			24	22 57 38.21	20.909		

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
WEDNESDAY 5.					FRIDAY 7.				
	h m s	s	S. ° ' "	"		h m s	s	N. ° ' "	"
0	22 57 38.21	20.909	7 41' 23.0	97 15	0	0 34 50.53	19.729	0 23' 16.5	101.57
1	22 59 43.57	20.878	7 31 39.2	97.45	1	0 36 48.86	19.714	0 33 25.6	101.46
2	23 1 48.74	20.846	7 21 53.7	97.73	2	0 38 47.10	19.699	0 43 34.0	101.34
3	23 3 53.72	20.813	7 12 6.4	98.02	3	0 40 45.25	19.684	0 53 41.7	101.22
4	23 5 58.50	20.782	7 2 17.5	98.28	4	0 42 43.31	19.669	1 3 48.6	101.09
5	23 8 3.10	20.751	6 52 27.0	98.54	5	0 44 41.28	19.656	1 13 54.8	100.97
6	23 10 7.51	20.719	6 42 35.0	98.79	6	0 46 39.18	19.643	1 24 0.2	100.83
7	23 12 11.73	20.688	6 32 41.5	99.04	7	0 48 36.99	19.629	1 34 4.7	100.68
8	23 14 15.77	20.658	6 22 46.5	99.28	8	0 50 34.73	19.617	1 44 8.3	100.53
9	23 16 19.63	20.628	6 12 50.2	99.49	9	0 52 32.39	19.604	1 54 11.0	100.36
10	23 18 23.30	20.598	6 2 52.6	99.71	10	0 54 29.98	19.592	2 4 12.6	100.19
11	23 20 26.80	20.569	5 52 53.7	99.91	11	0 56 27.49	19.580	2 14 13.3	100.03
12	23 22 30.13	20.540	5 42 53.7	100.11	12	0 58 24.94	19.569	2 24 12.9	99.84
13	23 24 33.28	20.511	5 32 52.4	100.30	13	1 0 22.32	19.558	2 34 11.4	99.65
14	23 26 36.26	20.483	5 22 50.1	100.48	14	1 2 19.64	19.548	2 44 8.7	99.46
15	23 28 39.07	20.454	5 12 46.7	100.64	15	1 4 16.89	19.538	2 54 4.9	99.26
16	23 30 41.71	20.426	5 2 42.4	100.80	16	1 6 14.09	19.528	3 3 59.8	99.04
17	23 32 44.18	20.398	4 52 37.1	100.96	17	1 8 11.23	19.518	3 13 53.4	98.83
18	23 34 46.49	20.372	4 42 30.9	101.10	18	1 10 8.31	19.509	3 23 45.7	98.61
19	23 36 48.64	20.346	4 32 23.9	101.23	19	1 12 5.34	19.502	3 33 36.7	98.39
20	23 38 50.64	20.319	4 22 16.1	101.37	20	1 14 2.33	19.493	3 43 26.4	98.16
21	23 40 52.47	20.293	4 12 7.5	101.48	21	1 15 59.26	19.485	3 53 14.6	97.91
22	23 42 54.15	20.267	4 1 58.3	101.58	22	1 17 56.15	19.478	4 3 1.3	97.67
23	23 44 55.67	20.242	S. 3 51 48.5	101.68	23	1 19 52.99	19.471	N. 4 12 46.6	97.42
THURSDAY 6.					SATURDAY 8.				
	h m s	s	S. ° ' "	"		h m s	s	N. ° ' "	"
0	23 46 57.05	20.217	S. 3 41 38.1	101.78	0	1 21 49.80	19.464	N. 4 22 30.3	97.15
1	23 48 58.27	20.192	3 31 27.2	101.86	1	1 23 46.56	19.458	4 32 12.4	96.89
2	23 50 59.35	20.168	3 21 15.8	101.94	2	1 25 43.29	19.453	4 41 53.0	96.63
3	23 53 0.28	20.144	3 11 3.9	102.01	3	1 27 39.99	19.447	4 51 31.9	96.34
4	23 55 1.08	20.121	3 0 51.7	102.06	4	1 29 36.65	19.442	5 1 9.1	96.06
5	23 57 1.73	20.097	2 50 39.2	102.11	5	1 31 33.29	19.437	5 10 44.6	95.77
6	23 59 2.24	20.074	2 40 26.4	102.15	6	1 33 29.89	19.432	5 20 18.3	95.48
7	0 1 2.62	20.052	2 30 13.4	102.18	7	1 35 26.47	19.428	5 29 50.3	95.18
8	0 3 2.86	20.030	2 20 0.2	102.21	8	1 37 23.03	19.425	5 39 20.5	94.87
9	0 5 2.98	20.008	2 9 46.9	102.23	9	1 39 19.57	19.422	5 48 48.7	94.55
10	0 7 2.96	19.987	1 59 33.5	102.24	10	1 41 16.09	19.418	5 58 15.1	94.24
11	0 9 2.82	19.967	1 49 20.0	102.24	11	1 43 12.59	19.416	6 7 39.6	93.92
12	0 11 2.56	19.946	1 39 6.6	102.23	12	1 45 9.08	19.413	6 17 2.1	93.58
13	0 13 2.17	19.926	1 28 53.2	102.22	13	1 47 5.55	19.412	6 26 22.6	93.25
14	0 15 1.67	19.906	1 18 40.0	102.19	14	1 49 2.02	19.411	6 35 41.1	92.90
15	0 17 1.04	19.886	1 8 26.9	102.17	15	1 50 58.48	19.409	6 44 57.4	92.55
16	0 19 0.30	19.868	0 58 14.0	102.13	16	1 52 54.93	19.408	6 54 11.7	92.21
17	0 20 59.45	19.849	0 48 1.3	102.08	17	1 54 51.38	19.408	7 3 23.9	91.85
18	0 22 58.49	19.831	0 37 49.0	102.03	18	1 56 47.83	19.408	7 12 33.9	91.48
19	0 24 57.42	19.813	0 27 37.0	101.98	19	1 58 44.28	19.408	7 21 41.7	91.11
20	0 26 56.24	19.795	0 17 25.3	101.91	20	2 0 40.73	19.409	7 30 47.2	90.73
21	0 28 54.96	19.778	S. 0 7 14.1	101.83	21	2 2 37.19	19.410	7 39 50.5	90.36
22	0 30 53.58	19.763	N. 0 2 56.6	101.74	22	2 4 33.65	19.411	7 48 51.5	89.97
23	0 32 52.11	19.746	0 13 6.8	101.66	23	2 6 30.12	19.413	7 57 50.2	89.58
24	0 34 50.53	19.729	N. 0 23 16.5	101.57	24	2 8 26.61	19.416	N. 8 6 46.5	89.18

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
SUNDAY 9.					TUESDAY 11.				
	h m s	s				h m s	s		
0	2 8 26.61	19.416	N. 8 6 46.5	89.18	0	3 42 28.05	19.869	N. 14 19 33.2	61.30
1	2 10 23.11	19.418	8 15 40.4	88.78	1	3 44 27.31	19.884	14 25 57.1	63.67
2	2 12 19.62	19.420	8 24 31.9	88.38	2	3 46 26.66	19.900	14 32 17.2	63.03
3	2 14 16.15	19.423	8 33 20.9	87.96	3	3 48 26.11	19.916	14 38 33.4	62.38
4	2 16 12.70	19.427	8 42 7.4	87.54	4	3 50 25.65	19.933	14 44 45.8	61.74
5	2 18 9.27	19.431	8 50 51.4	87.13	5	3 52 25.30	19.949	14 50 54.3	61.09
6	2 20 5.87	19.435	8 59 32.9	86.70	6	3 54 25.04	19.965	14 56 58.9	60.44
7	2 22 2.49	19.438	9 8 11.8	86.26	7	3 56 24.88	19.983	15 2 59.6	59.78
8	2 23 59.13	19.443	9 16 48.0	85.82	8	3 58 24.83	19.999	15 8 56.3	59.13
9	2 25 55.81	19.449	9 25 21.6	85.38	9	4 0 24.87	20.016	15 14 49.1	58.46
10	2 27 52.52	19.454	9 33 52.5	84.93	10	4 2 25.02	20.033	15 20 37.8	57.78
11	2 29 49.26	19.460	9 42 20.7	84.48	11	4 4 25.27	20.051	15 26 22.5	57.11
12	2 31 46.04	19.466	9 50 46.2	84.02	12	4 6 25.63	20.068	15 32 3.1	56.43
13	2 33 42.85	19.472	9 59 8.9	83.55	13	4 8 26.09	20.086	15 37 39.6	55.74
14	2 35 39.70	19.479	10 7 28.8	83.08	14	4 10 26.66	20.104	15 43 12.0	55.06
15	2 37 36.60	19.486	10 15 45.9	82.61	15	4 12 27.34	20.122	15 48 40.3	54.37
16	2 39 33.53	19.493	10 24 0.1	82.13	16	4 14 28.12	20.140	15 54 4.4	53.67
17	2 41 30.51	19.501	10 32 11.4	81.64	17	4 16 29.02	20.158	15 59 24.3	52.97
18	2 43 27.54	19.508	10 40 19.8	81.16	18	4 18 30.02	20.176	16 4 40.0	52.27
19	2 45 24.61	19.517	10 48 25.3	80.67	19	4 20 31.13	20.195	16 9 51.5	51.56
20	2 47 21.74	19.525	10 56 27.8	80.17	20	4 22 32.36	20.214	16 14 58.7	50.84
21	2 49 18.91	19.533	11 4 27.3	79.66	21	4 24 33.70	20.233	16 20 1.6	50.12
22	2 51 16.14	19.543	11 12 23.7	79.15	22	4 26 35.15	20.252	16 25 0.2	49.41
23	2 53 13.43	19.553	N. 11 20 17.1	78.64	23	4 28 36.72	20.271	N. 16 29 54.5	48.68
MONDAY 10.					WEDNESDAY 12.				
	h m s	s				h m s	s		
0	2 55 10.77	19.562	N. 11 28 7.4	78.12	0	4 30 38.40	20.289	N. 16 34 44.4	47.95
1	2 57 8.17	19.571	11 35 54.5	77.59	1	4 32 40.19	20.308	16 39 29.9	47.22
2	2 59 5.62	19.581	11 43 38.5	77.08	2	4 34 42.10	20.328	16 44 11.0	46.48
3	3 1 3.14	19.593	11 51 19.4	76.54	3	4 36 44.13	20.348	16 48 47.7	45.74
4	3 3 0.73	19.603	11 58 57.0	76.00	4	4 38 46.27	20.367	16 53 19.9	44.99
5	3 4 58.38	19.613	12 6 31.4	75.46	5	4 40 48.53	20.387	16 57 47.6	44.24
6	3 6 56.09	19.624	12 14 2.5	74.91	6	4 42 50.91	20.406	17 2 10.8	43.49
7	3 8 53.87	19.636	12 21 30.3	74.36	7	4 44 53.40	20.426	17 6 29.5	42.74
8	3 10 51.72	19.648	12 28 54.8	73.81	8	4 46 56.02	20.446	17 10 43.7	41.98
9	3 12 49.65	19.660	12 36 16.0	73.25	9	4 48 58.75	20.465	17 14 53.2	41.21
10	3 14 47.64	19.672	12 43 33.8	72.68	10	4 51 1.60	20.485	17 18 58.2	40.44
11	3 16 45.71	19.685	12 50 48.2	72.11	11	4 53 4.57	20.505	17 22 58.5	39.67
12	3 18 43.86	19.698	12 57 59.1	71.53	12	4 55 7.66	20.525	17 26 54.2	38.90
13	3 20 42.09	19.711	13 5 6.6	70.96	13	4 57 10.87	20.545	17 30 45.3	38.12
14	3 22 40.39	19.723	13 12 10.6	70.38	14	4 59 14.20	20.565	17 34 31.6	37.33
15	3 24 38.77	19.738	13 19 11.2	69.79	15	5 1 17.65	20.586	17 38 13.2	36.54
16	3 26 37.24	19.751	13 26 8.1	69.19	16	5 3 21.23	20.606	17 41 50.1	35.75
17	3 28 35.78	19.764	13 33 1.5	68.60	17	5 5 24.92	20.625	17 45 22.2	34.95
18	3 30 34.41	19.779	13 39 51.3	68.00	18	5 7 28.73	20.646	17 48 49.5	34.15
19	3 32 33.13	19.794	13 46 37.5	67.39	19	5 9 32.67	20.666	17 52 12.0	33.35
20	3 34 31.94	19.808	13 53 20.0	66.78	20	5 11 36.72	20.686	17 55 29.7	32.55
21	3 36 30.83	19.823	13 59 58.9	66.17	21	5 13 40.90	20.707	17 58 42.6	31.74
22	3 38 29.81	19.838	14 6 34.0	65.55	22	5 15 45.20	20.727	18 1 50.6	30.93
23	3 40 28.88	19.853	14 13 5.5	64.93	23	5 17 49.62	20.747	18 4 53.7	30.10
24	3 42 28.05	19.869	N. 14 19 33.2	64.30	24	5 19 54.16	20.767	N. 18 7 51.8	29.28

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
THURSDAY 13.					SATURDAY 15.				
	h m s	s	N. 18° 7 51' 8"	29.28		h m s	s	N. 18° 47 51' 6"	13.64
0	5 19 54.16	20.767			0	7 1 47.24	21.643		
1	5 21 58.82	20.787	18 10 45.1	28.46	1	7 3 57.14	21.658	18 46 26.9	14.59
2	5 24 3.60	20.807	18 13 33.3	27.63	2	7 6 7.13	21.673	18 44 56.5	15.55
3	5 26 8.50	20.827	18 16 16.6	26.80	3	7 8 17.21	21.687	18 43 20.3	16.50
4	5 28 13.52	20.848	18 18 54.9	25.97	4	7 10 27.37	21.701	18 41 38.5	17.44
5	5 30 18.67	20.868	18 21 28.2	25.13	5	7 12 37.62	21.715	18 39 51.0	18.40
6	5 32 23.93	20.887	18 23 56.5	24.29	6	7 14 47.95	21.728	18 37 57.7	19.37
7	5 34 29.31	20.908	18 26 19.7	23.44	7	7 16 58.36	21.743	18 35 58.6	20.32
8	5 36 34.82	20.928	18 28 37.8	22.59	8	7 19 8.86	21.757	18 33 53.9	21.27
9	5 38 40.44	20.947	18 30 50.8	21.74	9	7 21 19.44	21.769	18 31 43.4	22.23
10	5 40 46.18	20.967	18 32 58.7	20.88	10	7 23 30.09	21.783	18 29 27.1	23.19
11	5 42 52.04	20.987	18 35 1.4	20.02	11	7 25 40.83	21.796	18 27 5.1	24.15
12	5 44 58.02	21.007	18 36 59.0	19.17	12	7 27 51.64	21.808	18 24 37.3	25.12
13	5 47 4.12	21.027	18 38 51.4	18.30	13	7 30 2.53	21.821	18 22 3.7	26.08
14	5 49 10.34	21.046	18 40 38.6	17.43	14	7 32 13.49	21.833	18 19 24.4	27.03
15	5 51 16.67	21.065	18 42 20.6	16.57	15	7 34 24.53	21.846	18 16 39.4	27.99
16	5 53 23.12	21.085	18 43 57.4	15.69	16	7 36 35.64	21.858	18 13 48.5	28.96
17	5 55 29.69	21.104	18 45 28.9	14.81	17	7 38 46.82	21.869	18 10 51.9	29.92
18	5 57 36.37	21.123	18 46 55.1	13.93	18	7 40 58.07	21.881	18 7 49.5	30.88
19	5 59 43.17	21.143	18 48 16.0	13.05	19	7 43 9.39	21.893	18 4 41.4	31.83
20	6 1 50.08	21.162	18 49 31.7	12.17	20	7 45 20.78	21.904	18 1 27.5	32.80
21	6 3 57.11	21.181	18 50 42.0	11.28	21	7 47 32.24	21.915	17 58 7.8	33.77
22	6 6 4.25	21.199	18 51 47.0	10.38	22	7 49 43.76	21.925	17 54 42.3	34.73
23	6 8 11.50	21.218	N. 18 52 46.6	9.48	23	7 51 55.34	21.936	N. 17 51 11.0	35.69
FRIDAY 14.					SUNDAY 16.				
	h m s	s	N. 18 53 40.8	8.59		h m s	s	N. 17 47 34.0	36.65
0	6 10 18.87	21.237			0	7 54 6.99	21.947		
1	6 12 26.34	21.255	18 54 20.7	7.69	1	7 56 18.70	21.957	17 43 51.2	37.61
2	6 14 33.93	21.274	18 55 13.1	6.78	2	7 58 30.47	21.967	17 40 2.7	38.57
3	6 16 41.63	21.293	18 55 51.1	5.88	3	8 0 42.30	21.977	17 36 8.4	39.53
4	6 18 49.44	21.310	18 56 23.7	4.98	4	8 2 54.19	21.987	17 32 8.4	40.48
5	6 20 57.35	21.328	18 56 50.8	4.07	5	8 5 6.14	21.996	17 28 2.6	41.44
6	6 23 5.38	21.347	18 57 12.5	3.15	6	8 7 18.14	22.005	17 23 51.1	42.39
7	6 25 13.51	21.363	18 57 28.6	2.23	7	8 9 30.20	22.015	17 19 33.9	43.35
8	6 27 21.74	21.382	18 57 39.3	1.33	8	8 11 42.32	22.023	17 15 10.9	44.31
9	6 29 30.09	21.400	18 57 44.5	0.40	9	8 13 54.48	22.032	17 10 42.2	45.27
10	6 31 38.54	21.417	18 57 44.1	0.53	10	8 16 6.70	22.041	17 6 7.7	46.22
11	6 33 47.09	21.433	18 57 38.2	1.45	11	8 18 18.97	22.049	17 1 27.6	47.16
12	6 35 55.74	21.450	18 57 26.7	2.38	12	8 20 31.29	22.058	16 56 41.8	48.11
13	6 38 4.49	21.468	18 57 9.7	3.30	13	8 22 43.66	22.065	16 51 50.3	49.06
14	6 40 13.35	21.485	18 56 47.1	4.23	14	8 24 56.07	22.073	16 46 53.1	50.01
15	6 42 22.31	21.501	18 56 18.9	5.17	15	8 27 8.54	22.082	16 41 50.2	50.95
16	6 44 31.36	21.517	18 55 45.1	6.11	16	8 29 21.05	22.088	16 36 41.7	51.89
17	6 46 40.51	21.533	18 55 5.6	7.04	17	8 31 33.60	22.096	16 31 27.5	52.83
18	6 48 49.76	21.550	18 54 20.6	7.98	18	8 33 46.20	22.103	16 26 7.7	53.77
19	6 50 59.11	21.566	18 53 29.9	8.92	19	8 35 58.84	22.111	16 20 42.3	54.70
20	6 53 8.55	21.581	18 52 33.6	9.87	20	8 38 11.53	22.118	16 15 11.3	55.63
21	6 55 18.08	21.597	18 51 31.6	10.80	21	8 40 24.25	22.124	16 9 34.7	56.57
22	6 57 27.71	21.613	18 50 24.0	11.75	22	8 42 37.02	22.131	16 3 52.5	57.49
23	6 59 37.43	21.628	18 49 10.6	12.70	23	8 44 49.82	22.138	15 58 4.8	58.42
24	7 1 47.24	21.643	N. 18 47 51.6	13.64	24	8 47 2.67	22.144	N. 15 52 11.5	59.34

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
MONDAY 17.					WEDNESDAY 19.				
	h m s	s	N. 15° 52' 11.5"	59.34		h m s	s	N. 9° 29' 8.7"	98.09
0	8 47 2.67	22.144	15 46 12.7	60.26	0	10 33 54.01	22.368	9 19 18.2	98.73
1	8 49 15.55	22.150	15 40 8.4	61.18	1	10 36 8.23	22.373	9 9 23.9	99.38
2	8 51 28.47	22.156	15 33 58.6	62.08	2	10 38 22.48	22.378	8 59 25.7	100.00
3	8 53 41.42	22.162	15 27 43.4	62.99	3	10 40 36.76	22.382	8 49 23.9	100.62
4	8 55 54.41	22.168	15 21 22.7	63.90	4	10 42 51.06	22.387	8 39 18.3	101.23
5	8 58 7.44	22.174	15 14 56.6	64.81	5	10 45 5.40	22.393	8 29 9.1	101.83
6	9 0 20.50	22.179	15 8 25.0	65.71	6	10 47 19.77	22.398	8 18 56.4	102.42
7	9 2 33.59	22.184	15 1 48.1	66.60	7	10 49 34.17	22.403	8 8 40.1	103.00
8	9 4 46.71	22.190	14 55 5.8	67.49	8	10 51 48.61	22.409	7 58 20.4	103.58
9	9 6 59.87	22.196	14 48 18.2	68.38	9	10 54 3.08	22.414	7 47 57.2	104.14
10	9 9 13.06	22.201	14 41 25.2	69.27	10	10 56 17.58	22.420	7 37 30.7	104.69
11	9 11 26.28	22.206	14 34 27.0	70.14	11	10 58 32.12	22.427	7 27 0.9	105.23
12	9 13 39.53	22.211	14 27 23.5	71.03	12	11 0 46.70	22.433	7 16 27.9	105.77
13	9 15 52.81	22.215	14 20 14.7	71.89	13	11 3 1.32	22.439	7 5 51.7	106.30
14	9 18 6.11	22.220	14 13 0.8	72.76	14	11 5 15.97	22.445	6 55 12.3	106.81
15	9 20 19.45	22.225	14 5 41.6	73.63	15	11 7 30.66	22.452	6 44 30.0	107.31
16	9 22 32.81	22.229	13 58 17.3	74.48	16	11 9 45.39	22.458	6 33 44.6	107.81
17	9 24 46.20	22.234	13 50 47.8	75.33	17	11 12 0.16	22.466	6 22 56.3	108.29
18	9 26 59.62	22.239	13 43 13.3	76.18	18	11 14 14.98	22.473	6 12 5.1	108.77
19	9 29 13.07	22.243	13 35 33.7	77.03	19	11 16 29.83	22.479	6 1 11.1	109.23
20	9 31 26.54	22.248	13 27 49.0	77.87	20	11 18 44.73	22.488	5 50 14.4	109.68
21	9 33 40.04	22.252	13 19 59.3	78.69	21	11 20 59.68	22.495	5 39 15.0	110.12
22	9 35 53.56	22.256	N. 13° 12' 4.7"	79.52	22	11 23 14.67	22.502	N. 5° 28' 13.0"	110.54
23	9 38 7.11	22.261			23	11 25 29.70	22.510		
TUESDAY 18.					THURSDAY 20.				
	h m s	s	N. 13° 4' 5.1"	80.34		h m s	s	N. 5° 17' 8.5"	110.97
0	9 40 20.69	22.265	12 56 0.6	81.16	0	11 27 44.79	22.518	5 6 1.4	111.38
1	9 42 34.29	22.269	12 47 51.2	81.98	1	11 29 59.92	22.527	4 54 52.0	111.77
2	9 44 47.92	22.273	12 39 36.9	82.78	2	11 32 15.11	22.536	4 43 40.2	112.16
3	9 47 1.57	22.277	12 31 17.9	83.57	3	11 34 30.35	22.544	4 32 26.1	112.53
4	9 49 15.24	22.281	12 22 54.1	84.37	4	11 36 45.64	22.551	4 21 9.9	112.88
5	9 51 28.94	22.286	12 14 25.5	85.15	5	11 39 0.98	22.561	4 9 51.5	113.24
6	9 53 42.67	22.290	12 5 52.3	85.93	6	11 41 16.37	22.571	3 58 31.0	113.58
7	9 55 56.42	22.293	11 57 14.4	86.70	7	11 43 31.83	22.581	3 47 8.5	113.91
8	9 58 10.19	22.298	11 48 31.9	87.47	8	11 45 47.34	22.589	3 35 44.1	114.23
9	10 0 23.99	22.302	11 39 44.8	88.23	9	11 48 2.90	22.599	3 24 17.8	114.53
10	10 2 37.81	22.306	11 30 53.1	88.98	10	11 50 18.53	22.610	3 12 49.7	114.82
11	10 4 51.66	22.310	11 21 57.0	89.73	11	11 52 34.22	22.621	3 1 20.0	115.10
12	10 7 5.53	22.314	11 12 56.4	90.47	12	11 54 49.98	22.631	2 49 48.5	115.38
13	10 9 19.43	22.318	11 3 51.4	91.20	13	11 57 5.79	22.641	2 38 15.5	115.62
14	10 11 33.35	22.323	10 54 42.0	91.93	14	11 59 21.67	22.653	2 26 41.1	115.86
15	10 13 47.30	22.327	10 45 28.3	92.63	15	12 1 37.62	22.664	2 15 5.2	116.10
16	10 16 1.27	22.331	10 36 10.4	93.34	16	12 3 53.64	22.675	2 3 27.9	116.32
17	10 18 15.27	22.336	10 26 48.2	94.05	17	12 6 9.72	22.687	1 51 49.4	116.52
18	10 20 29.30	22.340	10 17 21.8	94.74	18	12 8 25.88	22.698	1 40 9.7	116.71
19	10 22 43.35	22.344	10 7 51.3	95.43	19	12 10 42.10	22.710	1 28 28.9	116.89
20	10 24 57.43	22.348	9 58 16.6	96.11	20	12 12 58.40	22.723	1 16 47.0	117.06
21	10 27 11.53	22.353	9 48 38.0	96.78	21	12 15 14.78	22.736	1 5 4.2	117.22
22	10 29 25.66	22.358	9 38 55.3	97.44	22	12 17 31.23	22.748	0 53 20.4	117.36
23	10 31 39.82	22.363	N. 9° 29' 8.7"	98.09	23	12 19 47.76	22.762	N. 0° 41' 35.9"	117.48
24	10 33 54.01	22.368			24	12 22 4.37	22.774		

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
FRIDAY 21.					SUNDAY 23.				
	h m s	s	N. ° ' "	"		h m s	s	S. ° ' "	"
0	12 22 4.37	22.774	N. 0 41 35.9	117.48	0	14 13 20.32	23.659	S. 8 31 27.6	107.66
1	12 24 21.05	22.788	0 29 50.6	117.60	1	14 15 42.34	23.681	8 42 12.0	107.12
2	12 26 37.82	22.803	0 18 4.7	117.70	2	14 18 4.49	23.703	8 52 53.0	106.56
3	12 28 54.68	22.816	N. 0 6 18.2	117.79	3	14 20 26.78	23.726	9 3 30.7	106.00
4	12 31 11.61	22.829	S. 0 5 28.8	117.88	4	14 22 49.20	23.748	9 14 5.0	105.42
5	12 33 28.63	22.844	0 17 16.3	117.93	5	14 25 11.76	23.771	9 24 35.7	104.82
6	12 35 45.74	22.859	0 29 4.0	117.98	6	14 27 34.45	23.793	9 35 2.8	104.21
7	12 38 2.94	22.874	0 40 52.1	118.03	7	14 29 57.27	23.815	9 45 26.2	103.58
8	12 40 20.23	22.889	0 52 40.3	118.04	8	14 32 20.23	23.838	9 55 45.8	102.95
9	12 42 37.61	22.904	1 4 28.6	118.05	9	14 34 43.33	23.860	10 6 1.6	102.31
10	12 44 55.08	22.920	1 16 16.9	118.04	10	14 37 6.55	23.883	10 16 13.5	101.65
11	12 47 12.65	22.937	1 28 5.1	118.03	11	14 39 29.92	23.906	10 26 21.4	100.98
12	12 49 30.32	22.953	1 39 53.2	118.00	12	14 41 53.42	23.928	10 36 25.2	100.28
13	12 51 48.08	22.968	1 51 41.1	117.95	13	14 44 17.05	23.950	10 46 24.8	99.58
14	12 54 5.93	22.984	2 3 28.6	117.89	14	14 46 40.82	23.973	10 56 20.2	98.88
15	12 56 23.89	23.002	2 15 15.8	117.83	15	14 49 4.72	23.995	11 6 11.4	98.16
16	12 58 41.95	23.018	2 27 2.5	117.73	16	14 51 28.76	24.017	11 15 58.1	97.42
17	13 1 0.11	23.035	2 38 48.6	117.63	17	14 53 52.92	24.038	11 25 40.4	96.68
18	13 3 18.37	23.053	2 50 34.1	117.53	18	14 56 17.22	24.062	11 35 18.2	95.92
19	13 5 36.74	23.071	3 2 18.9	117.39	19	14 58 41.66	24.083	11 44 51.4	95.15
20	13 7 55.22	23.088	3 14 2.8	117.25	20	15 1 6.22	24.105	11 54 20.0	94.36
21	13 10 13.80	23.107	3 25 45.9	117.10	21	15 3 30.92	24.127	12 3 43.7	93.56
22	13 12 32.50	23.125	3 37 28.0	116.93	22	15 5 55.74	24.148	12 13 2.7	92.76
23	13 14 51.30	23.143	S. 3 49 9.0	116.74	23	15 8 20.70	24.170	S. 12 22 16.8	91.94
SATURDAY 22.					MONDAY 24.				
	h m s	s	S. ° ' "	"		h m s	s	S. ° ' "	"
0	13 17 10.21	23.162	S. 4 0 48.9	116.55	0	15 10 45.78	24.192	S. 12 31 26.0	91.11
1	13 19 29.24	23.181	4 12 27.6	116.34	1	15 13 11.00	24.213	12 40 30.1	90.26
2	13 21 48.38	23.199	4 24 5.0	116.12	2	15 15 36.34	24.233	12 49 29.1	89.41
3	13 24 7.63	23.219	4 35 41.0	115.88	3	15 18 1.80	24.254	12 58 23.0	88.55
4	13 26 27.01	23.239	4 47 15.5	115.62	4	15 20 27.39	24.275	13 7 11.7	87.68
5	13 28 46.50	23.257	4 58 48.4	115.35	5	15 22 53.10	24.296	13 15 55.1	86.79
6	13 31 6.10	23.278	5 10 19.7	115.08	6	15 25 18.94	24.316	13 24 33.2	85.89
7	13 33 25.83	23.298	5 21 49.3	114.78	7	15 27 44.89	24.336	13 33 5.8	84.98
8	13 35 45.67	23.318	5 33 17.1	114.48	8	15 30 10.97	24.356	13 41 33.0	84.07
9	13 38 5.64	23.338	5 44 43.0	114.15	9	15 32 37.16	24.376	13 49 54.6	83.13
10	13 40 25.73	23.359	5 56 6.9	113.81	10	15 35 3.48	24.395	13 58 10.6	82.20
11	13 42 45.95	23.379	6 7 28.7	113.46	11	15 37 29.90	24.413	14 6 21.0	81.25
12	13 45 6.28	23.400	6 18 48.4	113.10	12	15 39 56.44	24.433	14 14 25.6	80.29
13	13 47 26.75	23.422	6 30 5.9	112.73	13	15 42 23.10	24.452	14 22 24.5	79.33
14	13 49 47.34	23.442	6 41 21.1	112.33	14	15 44 49.86	24.469	14 30 17.5	78.34
15	13 52 8.05	23.463	6 52 33.9	111.93	15	15 47 16.73	24.488	14 38 4.6	77.35
16	13 54 28.90	23.485	7 3 44.2	111.50	16	15 49 43.71	24.506	14 45 45.7	76.36
17	13 56 49.87	23.506	7 14 51.9	111.07	17	15 52 10.80	24.523	14 53 20.9	75.36
18	13 59 10.97	23.528	7 25 57.0	110.63	18	15 54 37.99	24.540	15 0 50.0	74.33
19	14 1 32.20	23.549	7 36 59.4	110.17	19	15 57 5.28	24.556	15 8 12.9	73.31
20	14 3 53.56	23.571	7 47 59.0	109.69	20	15 59 32.66	24.573	15 15 29.7	72.28
21	14 6 15.05	23.593	7 58 55.7	109.20	21	16 2 0.15	24.589	15 22 40.3	71.24
22	14 8 36.67	23.615	8 9 49.4	108.70	22	16 4 27.73	24.604	15 29 44.6	70.19
23	14 10 58.43	23.638	8 20 40.1	108.18	23	16 6 55.40	24.619	15 36 42.6	69.13
24	14 13 20.32	23.659	S. 8 31 27.6	107.66	24	16 9 23.16	24.634	S. 15 43 34.2	68.06

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
TUESDAY 25.					THURSDAY 27.				
	h ^h m ^m s ^s		S. 15° 43' 34".2	68".06		h ^h m ^m s ^s		S. 18° 56' 23".5	10".94
0	16 9 23.16	24.634	15 50 19.3	66.98	0	18 8 22.51	24.721	18 57 25.4	9.71
1	16 11 51.01	24.648	15 56 58.0	65.91	1	18 10 50.80	24.708	18 58 20.0	8.48
2	16 14 18.94	24.663	16 3 30.2	64.83	2	18 13 19.00	24.693	18 59 7.2	7.25
3	16 16 46.96	24.676	16 9 55.9	63.73	3	18 15 47.11	24.678	18 59 47.0	6.02
4	16 19 15.05	24.688	16 16 14.9	62.62	4	18 18 15.14	24.663	19 0 19.4	4.79
5	16 21 43.22	24.702	16 22 27.3	61.50	5	18 20 43.07	24.648	19 0 44.5	3.56
6	16 24 11.47	24.714	16 28 32.9	60.38	6	18 23 10.91	24.632	19 1 2.1	2.33
7	16 26 39.79	24.726	16 34 31.9	59.27	7	18 25 38.65	24.614	19 1 12.5	1.12
8	16 29 8.18	24.738	16 40 24.1	58.13	8	18 28 6.28	24.597	19 1 15.5	0.11
9	16 31 36.64	24.748	16 46 9.5	56.99	9	18 30 33.81	24.578	19 1 11.2	1.32
10	16 34 5.16	24.758	16 51 48.0	55.85	10	18 33 1.22	24.559	19 0 59.7	2.53
11	16 36 33.73	24.768	16 57 19.7	54.70	11	18 35 28.52	24.540	19 0 40.8	3.75
12	16 39 2.37	24.778	17 2 44.4	53.54	12	18 37 55.70	24.519	19 0 14.7	4.95
13	16 41 31.06	24.786	17 8 2.2	52.38	13	18 40 22.75	24.499	18 59 41.4	6.15
14	16 43 59.80	24.794	17 13 13.0	51.22	14	18 42 49.69	24.478	18 59 0.9	7.36
15	16 46 28.59	24.803	17 18 16.8	50.04	15	18 45 16.49	24.456	18 57 18.2	9.75
16	16 48 57.43	24.809	17 23 13.5	48.87	16	18 47 43.16	24.433	18 56 16.1	10.93
17	16 51 26.30	24.816	17 28 3.2	47.68	17	18 50 9.69	24.411	18 55 7.0	12.12
18	16 53 55.22	24.822	17 32 45.7	46.50	18	18 52 36.09	24.388	18 53 50.7	13.31
19	16 56 24.16	24.827	17 37 21.2	45.31	19	18 55 2.34	24.363	18 52 27.3	14.48
20	16 58 53.14	24.833	17 41 49.4	44.11	20	18 57 28.44	24.338	18 50 57.0	15.64
21	17 1 22.15	24.837	17 46 10.5	42.92	21	18 59 54.40	24.313	18 49 19.6	16.82
22	17 3 51.18	24.841	17 50 24.4	41.71	22	19 2 20.20	24.288		
23	17 6 20.24	24.844			23	19 4 45.85	24.262		
WEDNESDAY 26.					FRIDAY 28.				
	h ^h m ^m s ^s		S. 17° 54' 31".0	40.50		h ^h m ^m s ^s		S. 18° 47' 35".2	17.98
0	17 8 49.31	24.846	17 58 30.4	39.29	0	19 7 11.34	24.234	18 45 43.8	19.13
1	17 11 18.39	24.848	18 2 22.5	38.08	1	19 9 36.66	24.207	18 43 45.6	20.28
2	17 13 47.48	24.849	18 6 7.4	36.87	2	19 12 1.82	24.180	18 41 40.4	21.43
3	17 16 16.58	24.851	18 9 44.9	35.64	3	19 14 26.82	24.152	18 39 28.4	22.57
4	17 18 45.69	24.851	18 13 15.1	34.43	4	19 16 51.64	24.123	18 37 9.6	23.71
5	17 21 14.79	24.849	18 16 38.0	33.20	5	19 19 16.29	24.093	18 34 43.9	24.84
6	17 23 43.88	24.848	18 19 53.5	31.97	6	19 21 40.76	24.063	18 32 11.5	25.96
7	17 26 12.97	24.847	18 23 1.6	30.73	7	19 24 5.05	24.033	18 29 32.4	27.08
8	17 28 42.05	24.845	18 26 2.3	29.51	8	19 26 29.16	24.003	18 26 46.6	28.18
9	17 31 11.11	24.842	18 28 55.7	28.28	9	19 28 53.09	23.973	18 23 54.2	29.29
10	17 33 40.15	24.838	18 31 41.7	27.04	10	19 31 16.83	23.940	18 20 55.1	30.39
11	17 36 9.17	24.834	18 34 20.2	25.81	11	19 33 40.37	23.908	18 17 49.5	31.48
12	17 38 38.16	24.829	18 36 51.4	24.58	12	19 36 3.73	23.877	18 14 37.3	32.58
13	17 41 7.12	24.823	18 39 15.1	23.33	13	19 38 26.89	23.844	18 11 18.6	33.65
14	17 43 36.04	24.818	18 41 31.4	22.09	14	19 40 49.86	23.811	18 7 53.5	34.72
15	17 46 4.93	24.811	18 43 40.2	20.85	15	19 43 12.62	23.777	18 4 22.0	35.78
16	17 48 33.77	24.803	18 45 41.6	19.62	16	19 45 35.18	23.743	18 0 44.1	36.85
17	17 51 2.57	24.796	18 47 35.6	18.38	17	19 47 57.54	23.710	17 56 59.8	37.90
18	17 53 31.32	24.787	18 49 22.2	17.14	18	19 50 19.70	23.675	17 53 9.3	38.94
19	17 56 0.01	24.777	18 51 1.3	15.90	19	19 52 41.64	23.640	17 49 12.5	39.97
20	17 58 28.64	24.767	18 52 33.0	14.66	20	19 55 3.38	23.605	17 45 9.6	41.01
21	18 0 57.21	24.757	18 53 57.2	13.43	21	19 57 24.90	23.569	17 41 0.4	42.03
22	18 3 25.72	24.745	18 55 14.1	12.19	22	19 59 46.21	23.534	17 36 45.2	43.04
23	18 5 54.15	24.733			23	20 2 7.31	23.498		
24	18 8 22.51	24.721	S. 18° 56' 23".5	10.94	24	20 4 28.19	23.462	S. 17° 32' 23".9	44.05

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
SATURDAY 29.					MONDAY 31.				
	h m s	s	S. ° ' "	"		h m s	s	S. ° ' "	"
0	20 4 28.19	23.462	S. 17 32 23.9	44.05	0	21 52 38.24	21.602	S. 12 20 42.8	82.43
1	20 6 48.85	23.425	17 27 56.6	45.05	1	21 54 47.74	21.564	12 12 26.5	83.00
2	20 9 9.29	23.388	17 23 23.3	46.05	2	21 56 57.01	21.527	12 4 6.8	83.58
3	20 11 29.51	23.352	17 18 44.0	47.03	3	21 59 6.06	21.490	11 55 43.6	84.14
4	20 13 49.51	23.314	17 13 58.9	48.01	4	22 1 14.89	21.453	11 47 17.1	84.69
5	20 16 9.28	23.277	17 9 7.9	48.98	5	22 3 23.49	21.416	11 38 47.3	85.23
6	20 18 28.83	23.239	17 4 11.2	49.93	6	22 5 31.88	21.381	11 30 14.3	85.76
7	20 20 48.15	23.201	16 59 8.7	50.89	7	22 7 40.06	21.344	11 21 38.2	86.28
8	20 23 7.24	23.163	16 54 0.5	51.83	8	22 9 48.01	21.308	11 12 58.9	86.81
9	20 25 26.10	23.124	16 48 46.7	52.77	9	22 11 55.75	21.273	11 4 16.5	87.31
10	20 27 44.73	23.087	16 43 27.3	53.69	10	22 14 3.28	21.238	10 55 31.2	87.81
11	20 30 3.14	23.048	16 38 2.4	54.61	11	22 16 10.60	21.203	10 46 42.8	88.30
12	20 32 21.31	23.008	16 32 32.0	55.52	12	22 18 17.71	21.168	10 37 51.6	88.77
13	20 34 39.24	22.969	16 26 56.1	56.43	13	22 20 24.61	21.133	10 28 57.6	89.24
14	20 36 56.94	22.931	16 21 14.8	57.33	14	22 22 31.30	21.098	10 20 0.7	89.71
15	20 39 14.41	22.893	16 15 28.2	58.21	15	22 24 37.79	21.064	10 11 1.1	90.16
16	20 41 31.65	22.853	16 9 36.3	59.08	16	22 26 44.07	21.030	10 1 58.8	90.60
17	20 43 48.65	22.813	16 3 39.2	59.95	17	22 28 50.15	20.997	9 52 53.9	91.03
18	20 46 5.41	22.773	15 57 36.9	60.81	18	22 30 56.03	20.963	9 43 46.4	91.46
19	20 48 21.93	22.734	15 51 29.5	61.66	19	22 33 1.71	20.930	9 34 36.4	91.88
20	20 50 38.22	22.695	15 45 17.0	62.51	20	22 35 7.19	20.898	9 25 23.9	92.28
21	20 52 54.27	22.655	15 38 59.4	63.34	21	22 37 12.48	20.866	9 16 9.0	92.67
22	20 55 10.08	22.616	15 32 36.9	64.16	22	22 39 17.58	20.833	9 6 51.8	93.07
23	20 57 25.66	22.577	S. 15 26 9.5	64.98	23	22 41 22.48	20.802	S. 8 57 32.2	93.45
SUNDAY 30.					TUESDAY, APRIL 1.				
	h m s	s	S. ° ' "	"		h m s	s	S. ° ' "	"
0	20 59 41.00	22.537	S. 15 19 37.2	65.78	0	22 43 27.20	20.771	S. 8 48 10.4	93.83
1	21 1 56.10	22.497	15 13 0.1	66.58					
2	21 4 10.96	22.457	15 6 18.2	67.38					
3	21 6 25.58	22.417	14 51 31.6	68.15					
4	21 8 39.96	22.378	14 52 40.4	68.92					
5	21 10 54.11	22.338	14 45 44.6	69.68					
6	21 13 8.02	22.298	14 38 44.2	70.44					
7	21 15 21.69	22.258	14 31 39.3	71.18					
8	21 17 35.12	22.219	14 24 30.0	71.91					
9	21 19 48.32	22.180	14 17 16.4	72.63					
10	21 22 1.28	22.140	14 9 58.4	73.36					
11	21 24 14.00	22.101	14 2 36.1	74.07					
12	21 26 26.49	22.063	13 55 9.6	74.76					
13	21 28 38.75	22.022	13 47 39.0	75.45					
14	21 30 50.77	21.983	13 40 4.2	76.13					
15	21 33 2.55	21.945	13 32 25.4	76.80					
16	21 35 14.11	21.907	13 24 42.6	77.47					
17	21 37 25.43	21.868	13 16 55.8	78.12					
18	21 39 36.52	21.828	13 9 5.2	78.76					
19	21 41 47.37	21.790	13 1 10.7	79.39					
20	21 43 58.00	21.753	12 53 12.5	80.02					
21	21 46 8.40	21.715	12 45 10.5	80.63					
22	21 48 18.58	21.677	12 37 4.9	81.24					
23	21 50 28.52	21.638	12 28 55.6	81.84					
24	21 52 38.24	21.602	S. 12 20 42.8	82.43					
PHASES OF THE MOON.									
						h m			
Mar. 5	●	New Moon	-	-	-	3	57.7		
13	☾	First Quarter	-	-	-	4	50.4		
20	○	Full Moon	-	-	-	16	30.1		
27	☾	Last Quarter	-	-	-	8	24.3		
						h			
Mar. 11	☾	Apogee	-	-	-	9.9			
23	☾	Perigee	-	-	-	5.2			

APRIL, 1924.

AT APPARENT NOON.

		THE SUN'S				Sidereal Time of the Semi- diameter passing the Meridian.*	Equation of Time, to be added to		Var. in 1 hour
Date.		Apparent Right Ascension.	Var. in 1 hour.	Apparent Declination.	Var. in 1 hour.		subtracted from Apparent Time.		
		h m s	s	N. ° ' "	"	m s	m s	s	
Tues.	1	0 42 15.17	9.105	N. 4 32' 45".6	57.86	1 4.46	3 58.40	0.749	
Wed.	2	0 45 53.76	9.111	4 55 51.8	57.65	1 4.48	3 40.49	0.744	
Thur.	3	0 49 32.48	9.116	5 18 52.7	57.42	1 4.50	3 22.71	0.738	
Frid.	4	0 53 11.35	9.123	5 41 48.1	57.19	1 4.52	3 5.07	0.731	
Sat.	5	0 56 50.38	9.130	6 4 37.6	56.93	1 4.55	2 47.60	0.724	
Sun.	6	1 0 29.59	9.138	6 27 20.7	56.66	1 4.58	2 30.31	0.716	
Mon.	7	1 4 9.00	9.146	6 49 57.2	56.37	1 4.61	2 13.21	0.708	
Tues.	8	1 7 48.61	9.155	7 12 26.6	56.07	1 4.64	1 56.32	0.699	
Wed.	9	1 11 28.46	9.165	7 34 48.7	55.76	1 4.68	1 39.65	0.689	
Thur.	10	1 15 8.54	9.175	7 57 3.1	55.43	1 4.72	1 23.23	0.679	
Frid.	11	1 18 48.88	9.186	8 19 9.4	55.09	1 4.76	1 7.06	0.668	
Sat.	12	1 22 29.49	9.198	8 41 7.3	54.73	1 4.80	0 51.16	0.656	
Sun.	13	1 26 10.39	9.210	9 2 56.5	54.36	1 4.85	0 35.55	0.644	
Mon.	14	1 29 51.59	9.224	9 24 36.5	53.97	1 4.90	0 20.24	0.631	
Tues.	15	1 33 33.12	9.237	9 46 7.1	53.57	1 4.95	0 5.26	0.617	
Wed.	16	1 37 14.98	9.252	10 7 28.0	53.16	1 5.00	0 9.39	0.603	
Thur.	17	1 40 57.19	9.267	10 28 38.7	52.73	1 5.06	0 23.69	0.588	
Frid.	18	1 44 39.78	9.283	10 49 39.0	52.29	1 5.12	0 37.62	0.572	
Sat.	19	1 48 22.77	9.300	11 10 28.7	51.84	1 5.18	0 51.15	0.555	
Sun.	20	1 52 6.16	9.317	11 31 7.2	51.37	1 5.24	1 4.27	0.538	
Mon.	21	1 55 49.98	9.335	11 51 34.5	50.89	1 5.30	1 16.97	0.520	
Tues.	22	1 59 34.25	9.354	12 11 50.1	50.40	1 5.36	1 29.22	0.501	
Wed.	23	2 3 18.99	9.374	12 31 53.7	49.90	1 5.43	1 41.00	0.481	
Thur.	24	2 7 4.20	9.394	12 51 45.1	49.38	1 5.50	1 52.31	0.461	
Frid.	25	2 10 49.91	9.415	13 11 23.9	48.85	1 5.57	2 3.13	0.440	
Sat.	26	2 14 36.12	9.436	13 30 49.8	48.30	1 5.64	2 13.44	0.419	
Sun.	27	2 18 22.85	9.458	13 50 2.5	47.75	1 5.71	2 23.24	0.398	
Mon.	28	2 22 10.10	9.480	14 9 1.6	47.17	1 5.78	2 32.52	0.376	
Tues.	29	2 25 57.88	9.502	14 27 46.8	46.59	1 5.86	2 41.27	0.353	
Wed.	30	2 29 46.20	9.525	14 46 17.9	45.99	1 5.94	2 49.48	0.331	
Thur.	31	2 33 35.06	9.547	N. 15 4 34.4	45.38	1 6.01	2 57.15	0.308	

* Mean Time of the Semidiameter passing may be found by subtracting 0^s.18 from the Sidereal Time.

AT MEAN NOON.

Date.		THE SUN'S			Equation of Time, to be added to	Sidereal Time.
		Apparent Right Ascension.	Apparent Declination.	Semi- diameter.*	subtracted from Apparent Time.	
		h m s	N. ° ' "	' "	m s	h m s
Tues.	1	0 42 14.57	N. 4 32 41.8	16 1.46	3 58.45	0 38 16.11
Wed.	2	0 45 53.20	4 55 48.3	16 1.18	3 40.53	0 42 12.66
Thur.	3	0 49 31.96	5 18 49.5	16 0.90	3 22.75	0 46 9.22
Frid.	4	0 53 10.88	5 41 45.2	16 0.62	3 5.11	0 50 5.77
Sat.	5	0 56 49.95	6 4 34.9	16 0.35	2 47.63	0 54 2.32
Sun.	6	1 0 29.21	6 27 18.3	16 0.08	2 30.34	0 57 58.87
Mon.	7	1 4 8.66	6 49 55.1	15 59.80	2 13.24	1 1 55.42
Tues.	8	1 7 48.32	7 12 24.8	15 59.53	1 56.34	1 5 51.98
Wed.	9	1 11 28.20	7 34 47.2	15 59.26	1 39.67	1 9 48.53
Thur.	10	1 15 8.33	7 57 1.9	15 59.00	1 23.24	1 13 45.08
Frid.	11	1 18 48.71	8 19 8.4	15 58.73	1 7.07	1 17 41.63
Sat.	12	1 22 29.36	8 41 6.6	15 58.46	0 51.17	1 21 38.19
Sun.	13	1 26 10.30	9 2 55.9	15 58.20	0 35.56	1 25 34.74
Mon.	14	1 29 51.54	9 24 36.2	15 57.93	0 20.25	1 29 31.29
Tues.	15	1 33 33.10	9 46 7.0	15 57.67	0 5.26	1 33 27.84
Wed.	16	1 37 15.00	10 7 28.1	15 57.41	0 9.40	1 37 24.40
Thur.	17	1 40 57.25	10 28 39.1	15 57.15	0 23.70	1 41 20.95
Frid.	18	1 44 39.88	10 49 39.6	15 56.89	0 37.62	1 45 17.50
Sat.	19	1 48 22.90	11 10 29.4	15 56.63	0 51.16	1 49 14.06
Sun.	20	1 52 6.33	11 31 8.2	15 56.36	1 4.28	1 53 10.61
Mon.	21	1 55 50.18	11 51 35.6	15 56.10	1 16.98	1 57 7.16
Tues.	22	1 59 34.48	12 11 51.3	15 55.84	1 29.23	2 1 3.72
Wed.	23	2 3 19.25	12 31 55.1	15 55.58	1 41.02	2 5 0.27
Thur.	24	2 7 4.50	12 51 46.6	15 55.32	1 52.33	2 8 56.82
Frid.	25	2 10 50.24	13 11 25.5	15 55.06	2 3.14	2 12 53.38
Sat.	26	2 14 36.48	13 30 51.6	15 54.80	2 13.45	2 16 49.93
Sun.	27	2 18 23.23	13 50 4.4	15 54.55	2 23.25	2 20 46.48
Mon.	28	2 22 10.51	14 9 3.6	15 54.30	2 32.53	2 24 43.04
Tues.	29	2 25 58.31	14 27 48.9	15 54.05	2 41.28	2 28 39.59
Wed.	30	2 29 46.65	14 46 20.0	15 53.80	2 49.49	2 32 36.15
Thur.	31	2 33 35.53	N. 15 4 36.6	15 53.56	2 57.17	2 36 32.70

* The Semidiameter for *Apparent* Noon may be assumed the same as that for *Mean* Noon.

MEAN TIME.

Day.	THE SUN'S <i>Apparent</i>		Logarithm of the Radius Vector of the Earth.	Transit of the First Point of Aries.	THE MOON'S			
	Longitude.	Latitude.			Semidiameter.		Horizontal Parallax.	
	Noon.	Noon.			Noon.	Midnight.	Noon.	Midnight.
				h m s				
1	11 29 13.0	N. 0.24	9.9998732	23 17 54.25	15 21.21	15 17.20	56 20.98	56 6.25
2	12 28 23.2	N. 0.11	9.9999998	23 13 58.35	15 13.30	15 9.52	55 51.93	55 38.07
3	13 27 31.5	S. 0.01	0.0001259	23 10 2.44	15 5.88	15 2.40	55 24.71	55 11.95
4	14 26 37.7	0.11	0.0002512	23 6 6.53	14 59.11	14 56.03	54 59.86	54 48.57
5	15 25 41.9	0.19	.0003759	23 2 10.63	14 53.21	14 50.68	54 38.21	54 28.92
6	16 24 44.0	0.25	.0004999	22 58 14.72	14 48.48	14 46.66	54 20.85	54 14.17
7	17 23 44.0	0.28	0.0006231	22 54 18.81	14 45.26	14 44.33	54 9.03	54 5.61
8	18 22 41.8	0.28	.0007456	22 50 22.91	14 43.91	14 44.04	54 4.06	54 4.54
9	19 21 37.4	0.26	.0008676	22 46 27.00	14 44.75	14 46.10	54 7.18	54 12.10
10	20 20 30.7	0.21	0.0009889	22 42 31.09	14 48.08	14 50.74	54 19.39	54 29.13
11	21 19 21.8	0.14	.0011096	22 38 35.19	14 54.07	14 58.07	54 41.35	54 56.06
12	22 18 10.6	S. 0.05	.0012298	22 34 39.28	15 2.75	15 8.06	55 13.21	55 32.71
13	23 16 57.2	N. 0.06	0.0013496	22 30 43.37	15 13.98	15 20.44	55 54.42	56 18.13
14	24 15 41.5	0.18	.0014690	22 26 47.47	15 27.36	15 34.66	56 43.55	57 10.34
15	25 14 23.5	0.31	.0015882	22 22 51.56	15 42.22	15 49.89	57 38.07	58 6.24
16	26 13 3.4	0.44	0.0017071	22 18 55.65	15 57.54	16 4.98	58 34.30	59 1.62
17	27 11 41.1	0.56	.0018260	22 14 59.75	16 12.04	16 18.54	59 27.53	59 51.38
18	28 10 16.7	0.67	.0019449	22 11 3.84	16 24.30	16 29.16	60 12.52	60 30.34
19	29 8 50.2	0.76	0.0020638	22 7 7.93	16 32.97	16 35.64	60 44.35	60 54.16
20	30 7 21.9	0.82	.0021828	22 3 12.02	16 37.11	16 37.33	60 59.52	61 0.36
21	31 5 51.7	0.84	.0023017	21 59 16.12	16 36.35	16 34.23	60 56.76	60 48.98
22	32 4 19.8	0.83	0.0024204	21 55 20.21	16 31.07	16 27.00	60 37.37	60 22.42
23	33 2 46.2	0.79	.0025389	21 51 24.30	16 22.16	16 16.72	60 4.67	59 44.69
24	34 1 11.0	0.72	.0026569	21 47 28.39	16 10.82	16 4.64	59 23.06	59 0.35
25	34 59 34.2	0.62	0.0027744	21 43 32.49	15 58.29	15 51.90	58 37.05	58 13.61
26	35 57 55.9	0.51	.0028911	21 39 36.58	15 45.58	15 39.42	57 50.43	57 27.81
27	36 56 16.1	0.38	.0030068	21 35 40.67	15 33.48	15 27.81	57 6.00	56 45.19
28	37 54 34.7	0.25	0.0031215	21 31 44.76	15 22.44	15 17.40	56 25.49	56 7.01
29	38 52 51.8	N. 0.12	.0032349	21 27 48.85	15 12.71	15 8.36	55 49.77	55 33.80
30	39 51 7.4	0.00	.0033469	21 23 52.95	15 4.35	15 0.68	55 19.09	55 5.63
31	40 49 21.3	S. 0.10	0.0034575	21 19 57.04	14 57.34	14 54.33	54 53.38	54 42.33

MEAN TIME.

Day.	THE MOON'S						
	Longitude.		Latitude.		Age.	Meridian Passage.	
	Noon.	Midnight.	Noon.	Midnight.	Noon.	Upper.	Lower.
1	339 0 53.1	345 24 8.1	S. 0 39 30.9	S. 1 13 36.4	d 26.84	h m 22 48.1	h m 10 24.9
2	351 44 33.3	358 2 15.4	1 46 29.3	2 17 47.4	27.84	23 33.2	11 10.8
3	4 17 20.8	10 29 55.0	2 47 10.0	3 14 18.9	28.84	* *	11 55.4
4	16 40 3.6	22 47 52.6	3 38 57.9	4 0 53.4	0.20	0 17.5	12 39.4
5	28 53 28.8	34 57 0.1	4 19 53.9	4 35 50.3	1.20	1 1.4	13 23.4
6	40 58 36.2	46 58 28.7	4 48 35.7	4 58 5.4	2.20	1 45.5	14 7.7
7	52 56 51.6	58 54 1.1	5 4 16.4	5 7 7.5	3.20	2 30.1	14 52.7
8	64 50 16.5	70 45 59.5	5 6 39.0	5 2 52.6	4.20	3 15.6	15 38.7
9	76 41 34.9	82 37 30.0	4 55 50.9	4 45 38.0	5.20	4 2.1	16 25.7
10	88 34 14.5	94 32 20.7	4 32 18.5	4 15 58.1	6.20	4 49.5	17 13.6
11	100 32 22.9	106 34 56.8	3 56 43.5	3 34 42.5	7.20	5 37.9	18 2.3
12	112 40 39.3	118 50 8.0	3 10 3.9	2 42 58.2	8.20	6 26.9	18 51.6
13	125 4 0.1	131 22 51.8	2 13 37.6	1 42 16.5	9.20	7 16.4	19 41.3
14	137 47 17.2	144 17 47.0	S. 1 9 11.7	S. 0 34 43.2	10.20	8 6.3	20 31.4
15	150 54 47.3	157 38 38.0	N. 0 0 46.0	N. 0 36 49.1	11.20	8 56.6	21 22.0
16	164 29 31.5	171 27 30.7	1 12 55.8	1 48 32.3	12.20	9 47.5	22 13.4
17	178 32 28.2	185 44 4.7	2 23 1.6	2 55 44.7	13.20	10 39.5	23 6.1
18	193 1 48.5	200 24 55.7	3 26 1.4	3 53 11.9	14.20	11 33.0	* *
19	207 52 30.8	215 23 28.3	4 16 38.9	4 35 49.3	15.20	12 28.4	0 0.5
20	222 56 35.4	230 30 34.8	4 50 15.8	4 59 38.6	16.20	13 25.9	0 56.9
21	238 4 8.6	245 36 1.5	5 3 46.5	5 2 37.0	17.20	14 25.2	1 55.4
22	253 5 4.4	260 30 16.7	4 56 16.2	4 44 58.3	18.20	15 25.3	2 55.2
23	267 50 48.8	275 6 2.6	4 29 1.0	4 8 59.3	19.20	16 25.0	3 55.3
24	282 15 31.9	289 19 2.0	3 45 13.8	3 18 19.7	20.20	17 23.1	4 54.3
25	296 16 28.5	303 7 55.6	2 48 49.9	2 17 17.5	21.20	18 18.4	5 51.1
26	309 53 35.1	316 33 43.9	1 44 14.8	1 10 12.8	22.20	19 10.6	6 44.9
27	323 8 43.2	329 38 56.2	N. 0 35 40.8	N. 0 1 6.7	23.20	19 59.8	7 35.6
28	336 4 47.6	342 26 42.3	S. 0 33 3.9	S. 1 6 26.7	24.20	20 46.6	8 23.5
29	348 45 4.0	355 0 15.6	1 38 39.9	2 9 22.9	25.20	21 31.6	9 9.3
30	1 12 37.8	7 22 29.4	2 38 17.0	3 5 5.4	26.20	22 15.5	9 53.7
31	13 30 7.1	19 35 45.6	S. 3 29 32.6	S. 3 51 25.5	27.20	22 59.0	10 37.3

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
TUESDAY 1.					THURSDAY 3.				
	h m s	s				h m s	s		
0	22 43 27.20	20.771	S. 8 48 10.4	93.83	0	0 20 10.05	19.666	S. 0 51 7.4	101.81
1	22 45 31.73	20.739	8 38 46.3	94.19	1	0 22 8.00	19.652	0 40 56.6	101.79
2	22 47 36.07	20.708	8 29 20.1	94.54	2	0 24 5.87	19.638	0 30 45.9	101.76
3	22 49 40.23	20.678	8 19 51.8	94.88	3	0 26 3.66	19.625	0 20 35.5	101.71
4	22 51 44.20	20.647	8 10 21.5	95.22	4	0 28 1.37	19.613	0 10 25.4	101.66
5	22 53 47.99	20.617	8 0 49.2	95.55	5	0 29 59.01	19.600	S. 0 0 15.6	101.61
6	22 55 51.60	20.588	7 51 14.9	95.88	6	0 31 56.57	19.588	N. 0 9 53.9	101.54
7	22 57 55.04	20.559	7 41 38.7	96.18	7	0 33 54.06	19.577	0 20 2.9	101.47
8	22 59 58.31	20.530	7 32 0.7	96.48	8	0 35 51.49	19.564	0 30 11.5	101.39
9	23 2 1.40	20.501	7 22 20.9	96.78	9	0 37 48.84	19.553	0 40 10.6	101.31
10	23 4 4.32	20.473	7 12 39.3	97.07	10	0 39 46.13	19.543	0 50 27.2	101.22
11	23 6 7.07	20.445	7 2 56.1	97.33	11	0 41 43.36	19.533	1 0 34.2	101.12
12	23 8 9.66	20.418	6 53 11.3	97.60	12	0 43 40.52	19.523	1 10 40.6	101.01
13	23 10 12.08	20.390	6 43 24.9	97.87	13	0 45 37.63	19.513	1 20 46.3	100.89
14	23 12 14.34	20.363	6 33 36.9	98.12	14	0 47 34.68	19.503	1 30 51.3	100.78
15	23 14 16.44	20.337	6 23 47.5	98.36	15	0 49 31.67	19.495	1 40 55.6	100.64
16	23 16 18.38	20.311	6 13 56.6	98.59	16	0 51 28.62	19.487	1 50 59.0	100.51
17	23 18 20.17	20.285	6 4 4.4	98.82	17	0 53 25.51	19.478	2 1 1.7	100.38
18	23 20 21.80	20.259	5 54 10.8	99.04	18	0 55 22.36	19.471	2 11 3.5	100.22
19	23 22 23.28	20.234	5 44 15.9	99.25	19	0 57 19.16	19.463	2 21 4.3	100.06
20	23 24 24.61	20.209	5 34 19.8	99.45	20	0 59 15.92	19.457	2 31 4.2	99.90
21	23 26 25.79	20.184	5 24 22.5	99.63	21	1 1 12.64	19.450	2 41 3.1	99.73
22	23 28 26.82	20.161	5 14 24.2	99.82	22	1 3 9.32	19.443	2 51 1.0	99.56
23	23 30 27.72	20.138	S. 5 4 24.7	100.00	23	1 5 5.96	19.437	N. 3 0 57.8	99.37
WEDNESDAY 2.					FRIDAY 4.				
0	23 32 28.47	20.114	S. 4 54 24.2	100.17	0	1 7 2.56	19.431	N. 3 10 53.4	99.18
1	23 34 29.09	20.091	4 44 22.7	100.33	1	1 8 59.13	19.427	3 20 47.9	98.98
2	23 36 29.56	20.068	4 34 20.3	100.48	2	1 10 55.68	19.422	3 30 41.2	98.78
3	23 38 29.91	20.047	4 24 16.9	100.63	3	1 12 52.19	19.417	3 40 33.3	98.58
4	23 40 30.12	20.024	4 14 12.8	100.75	4	1 14 48.68	19.413	3 50 24.1	98.35
5	23 42 30.20	20.003	4 4 7.9	100.88	5	1 16 45.14	19.408	4 0 13.5	98.13
6	23 44 30.15	19.982	3 54 2.2	101.01	6	1 18 41.58	19.405	4 10 1.6	97.90
7	23 46 29.98	19.962	3 43 55.8	101.12	7	1 20 38.00	19.402	4 19 48.3	97.68
8	23 48 29.69	19.941	3 33 48.8	101.22	8	1 22 34.40	19.399	4 29 33.6	97.43
9	23 50 29.27	19.920	3 23 41.2	101.31	9	1 24 30.79	19.397	4 39 17.4	97.18
10	23 52 28.73	19.901	3 13 33.1	101.40	10	1 26 27.16	19.393	4 48 59.7	96.92
11	23 54 28.08	19.883	3 3 24.4	101.48	11	1 28 23.51	19.392	4 58 40.4	96.65
12	23 56 27.32	19.863	2 53 15.3	101.55	12	1 30 19.86	19.391	5 8 19.5	96.38
13	23 58 26.44	19.843	2 43 5.8	101.62	13	1 32 16.20	19.389	5 17 57.0	96.12
14	0 0 25.45	19.827	2 32 55.9	101.68	14	1 34 12.53	19.388	5 27 32.9	95.83
15	0 2 24.36	19.809	2 22 45.7	101.72	15	1 36 8.86	19.388	5 37 7.0	95.54
16	0 4 23.16	19.792	2 12 35.2	101.76	16	1 38 5.19	19.388	5 46 39.4	95.25
17	0 6 21.86	19.775	2 2 24.6	101.79	17	1 40 1.51	19.388	5 56 10.0	94.94
18	0 8 20.46	19.758	1 52 13.7	101.83	18	1 41 57.84	19.388	6 5 38.7	94.64
19	0 10 18.96	19.742	1 42 2.7	101.84	19	1 43 54.17	19.388	6 15 5.7	94.33
20	0 12 17.36	19.725	1 31 51.6	101.85	20	1 45 50.50	19.389	6 24 30.7	94.01
21	0 14 15.66	19.710	1 21 40.5	101.85	21	1 47 46.84	19.391	6 33 53.8	93.68
22	0 16 13.88	19.696	1 11 29.4	101.85	22	1 49 43.19	19.393	6 43 14.9	93.36
23	0 18 12.01	19.681	1 1 18.3	101.83	23	1 51 39.55	19.394	6 52 34.1	93.03
24	0 20 10.05	19.666	S. 0 51 7.4	101.81	24	1 53 35.92	19.397	N. 7 1 51.2	92.68

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
SATURDAY 5.					MONDAY 7.				
	h m s	s	N. ° ' 51.2	92.68		h m s	s	N. 13 36 16.7	69.60
0	1 53 35.92	19.397	7 11 6.2	92.33	0	3 27 27.68	19.802	13 36 16.7	69.60
1	1 55 32.31	19.399	7 20 19.1	91.97	1	3 29 26.53	19.815	13 43 12.5	68.99
2	1 57 28.71	19.402	7 29 29.8	91.61	2	3 31 25.46	19.828	13 50 4.6	68.38
3	1 59 25.13	19.404	7 38 38.4	91.24	3	3 33 24.47	19.842	13 56 53.0	67.76
4	2 1 21.56	19.408	7 47 44.7	90.87	4	3 35 23.56	19.856	14 3 37.7	67.14
5	2 3 18.02	19.413	7 56 48.8	90.49	5	3 37 22.74	19.870	14 10 18.7	66.51
6	2 5 14.51	19.416	8 5 50.6	90.10	6	3 39 22.00	19.883	14 16 55.8	65.88
7	2 7 11.01	19.419	8 14 50.0	89.71	7	3 41 21.34	19.898	14 23 29.2	65.25
8	2 9 7.54	19.424	8 23 47.1	89.33	8	3 43 20.77	19.913	14 29 58.8	64.61
9	2 11 4.10	19.429	8 32 41.9	88.92	9	3 45 20.29	19.928	14 36 24.5	63.96
10	2 13 0.69	19.435	8 41 34.1	88.50	10	3 47 19.90	19.942	14 42 46.3	63.31
11	2 14 57.32	19.440	8 50 23.9	88.09	11	3 49 19.59	19.956	14 49 4.2	62.66
12	2 16 53.97	19.445	8 59 11.2	87.68	12	3 51 19.37	19.971	14 55 18.2	62.00
13	2 18 50.66	19.451	9 7 56.0	87.25	13	3 53 19.24	19.986	15 1 28.2	61.33
14	2 20 47.38	19.458	9 16 38.2	86.82	14	3 55 19.20	20.001	15 7 34.2	60.67
15	2 22 44.15	19.464	9 25 17.8	86.38	15	3 57 19.25	20.016	15 13 36.2	60.00
16	2 24 40.95	19.470	9 33 54.8	85.94	16	3 59 19.39	20.031	15 19 34.2	59.33
17	2 26 37.79	19.477	9 42 29.1	85.49	17	4 1 19.62	20.046	15 25 28.1	58.64
18	2 28 34.67	19.484	9 51 0.7	85.04	18	4 3 19.94	20.061	15 31 17.9	57.95
19	2 30 31.60	19.493	9 59 29.6	84.58	19	4 5 20.35	20.077	15 37 3.5	57.27
20	2 32 28.58	19.500	10 7 55.7	84.11	20	4 7 20.86	20.093	15 42 45.1	56.58
21	2 34 25.60	19.507	10 16 18.9	83.64	21	4 9 21.46	20.108	15 48 22.4	55.88
22	2 36 22.66	19.515	10 24 39.4	83.18	22	4 11 22.15	20.123	15 53 55.6	55.18
23	2 38 19.78	19.524			23	4 13 22.94	20.139	N. 15 59 24.5	54.47
SUNDAY 6.					TUESDAY 8.				
	h m s	s	N. 10 32 57.0	82.69		h m s	s	N. 16 4 49.2	53.77
0	2 40 16.95	19.533	10 41 11.7	82.20	0	4 15 23.82	20.155	16 10 9.7	53.05
1	2 42 14.17	19.542	10 49 23.4	81.71	1	4 17 24.80	20.171	16 15 25.8	52.33
2	2 44 11.45	19.551	10 57 32.2	81.22	2	4 19 25.87	20.187	16 20 37.6	51.61
3	2 46 8.78	19.560	11 5 38.0	80.72	3	4 21 27.04	20.203	16 25 45.1	50.88
4	2 48 6.17	19.569	11 13 40.8	80.20	4	4 23 28.30	20.218	16 30 48.2	50.15
5	2 50 3.61	19.579	11 21 40.4	79.68	5	4 25 29.66	20.234	16 35 46.9	49.42
6	2 52 1.12	19.589	11 29 37.0	79.18	6	4 27 31.11	20.250	16 40 41.2	48.68
7	2 53 58.68	19.599	11 37 30.6	78.66	7	4 29 32.66	20.267	16 45 31.1	47.94
8	2 55 56.31	19.610	11 45 20.9	78.12	8	4 31 34.31	20.283	16 50 16.5	47.20
9	2 57 54.00	19.620	11 53 8.0	77.58	9	4 33 36.05	20.298	16 54 57.5	46.45
10	2 59 51.75	19.631	12 0 51.9	77.05	10	4 35 37.89	20.315	16 59 33.9	45.69
11	3 1 49.57	19.643	12 8 32.6	76.52	11	4 37 39.83	20.331	17 4 5.8	44.93
12	3 3 47.46	19.653	12 16 10.1	75.97	12	4 39 41.86	20.347	17 8 33.1	44.18
13	3 5 45.41	19.664	12 23 44.2	75.40	13	4 41 43.99	20.363	17 12 55.9	43.42
14	3 7 43.43	19.677	12 31 14.9	74.84	14	4 43 46.22	20.380	17 17 14.1	42.65
15	3 9 41.53	19.688	12 38 42.3	74.28	15	4 45 48.55	20.396	17 21 27.7	41.88
16	3 11 39.69	19.700	12 46 6.3	73.72	16	4 47 50.97	20.411	17 25 36.6	41.10
17	3 13 37.93	19.713	12 53 26.9	73.14	17	4 49 53.48	20.428	17 29 40.9	40.32
18	3 15 36.24	19.724	13 0 44.0	72.56	18	4 51 56.10	20.444	17 33 40.4	39.53
19	3 17 34.62	19.737	13 7 57.6	71.98	19	4 53 58.81	20.460	17 37 35.3	38.76
20	3 19 33.08	19.749	13 15 7.7	71.39	20	4 56 1.62	20.477	17 41 25.5	37.97
21	3 21 31.61	19.762	13 22 14.3	70.80	21	4 58 4.53	20.493	17 45 10.9	37.18
22	3 23 30.22	19.775	13 29 17.3	70.20	22	5 0 7.53	20.508	17 48 51.6	36.38
23	3 25 28.91	19.788			23	5 2 10.63	20.524		
24	3 27 27.68	19.802	N. 13 36 16.7	69.60	24	5 4 13.82	20.540	N. 17 52 27.4	35.58

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
WEDNESDAY 9.					FRIDAY 11.				
	h m s	s				h m s	s		
0	5 4 13.82	20.540	N.17 52 27.4	35.58	0	6 44 32.22	21.216	N.19 5 42.2	5.97
1	5 6 17.11	20.557	17 55 58.5	34.78	1	6 46 39.55	21.227	19 5 3.6	6.88
2	5 8 20.50	20.573	17 59 24.7	33.97	2	6 48 46.94	21.238	19 4 19.6	7.80
3	5 10 23.98	20.588	18 2 46.1	33.16	3	6 50 54.40	21.248	19 3 30.0	8.72
4	5 12 27.56	20.604	18 6 2.6	32.35	4	6 53 1.92	21.259	19 2 35.0	9.63
5	5 14 31.23	20.620	18 9 14.3	31.53	5	6 55 9.51	21.270	19 1 34.4	10.56
6	5 16 35.00	20.636	18 12 21.0	30.71	6	6 57 17.16	21.281	19 0 28.3	11.48
7	5 18 38.86	20.652	18 15 22.8	29.89	7	6 59 24.88	21.291	18 59 16.7	12.39
8	5 20 42.82	20.668	18 18 19.7	29.07	8	7 1 32.65	21.301	18 57 59.6	13.32
9	5 22 46.87	20.683	18 21 11.6	28.24	9	7 3 40.49	21.312	18 56 36.9	14.24
10	5 24 51.01	20.698	18 23 58.6	27.41	10	7 5 48.39	21.322	18 55 8.7	15.16
11	5 26 55.24	20.713	18 26 40.5	26.58	11	7 7 56.35	21.331	18 53 35.0	16.08
12	5 28 59.57	20.729	18 29 17.5	25.74	12	7 10 4.36	21.341	18 51 55.7	17.02
13	5 31 3.99	20.745	18 31 49.4	24.90	13	7 12 12.44	21.351	18 50 10.8	17.94
14	5 33 8.51	20.760	18 34 16.3	24.06	14	7 14 20.57	21.360	18 48 20.4	18.86
15	5 35 13.11	20.774	18 36 38.1	23.21	15	7 16 28.76	21.369	18 46 24.5	19.78
16	5 37 17.80	20.790	18 38 54.8	22.37	16	7 18 37.00	21.378	18 44 23.0	20.72
17	5 39 22.59	20.805	18 41 6.5	21.52	17	7 20 45.30	21.388	18 42 15.9	21.64
18	5 41 27.46	20.819	18 43 13.0	20.66	18	7 22 53.65	21.396	18 40 3.3	22.57
19	5 43 32.42	20.834	18 45 14.4	19.81	19	7 25 2.05	21.405	18 37 45.1	23.50
20	5 45 37.47	20.849	18 47 10.7	18.95	20	7 27 10.51	21.414	18 35 21.3	24.43
21	5 47 42.61	20.864	18 49 1.8	18.08	21	7 29 19.02	21.423	18 32 52.0	25.35
22	5 49 47.84	20.878	18 50 47.7	17.22	22	7 31 27.58	21.431	18 30 17.1	26.28
23	5 51 53.15	20.893	N.18 52 28.4	16.35	23	7 33 36.19	21.439	N.18 27 36.6	27.22
THURSDAY 10.					SATURDAY 12.				
	h m s	s				h m s	s		
0	5 53 58.55	20.907	N.18 54 3.9	15.48	0	7 35 44.85	21.448	N.18 24 50.5	28.14
1	5 56 4.03	20.921	18 55 34.2	14.62	1	7 37 53.56	21.455	18 21 58.9	29.07
2	5 58 9.60	20.936	18 56 59.3	13.75	2	7 40 2.31	21.463	18 19 1.7	30.00
3	6 0 15.26	20.950	18 58 19.2	12.88	3	7 42 11.12	21.472	18 15 58.9	30.93
4	6 2 21.00	20.963	18 59 33.8	11.99	4	7 44 19.97	21.479	18 12 50.6	31.85
5	6 4 26.82	20.977	19 0 43.1	11.11	5	7 46 28.87	21.487	18 9 36.7	32.78
6	6 6 32.72	20.991	19 1 47.1	10.23	6	7 48 37.81	21.494	18 6 17.2	33.71
7	6 8 38.71	21.004	19 2 45.8	9.34	7	7 50 46.80	21.502	18 2 52.2	34.63
8	6 10 44.77	21.018	19 3 39.2	8.46	8	7 52 55.83	21.509	17 59 21.7	35.56
9	6 12 50.92	21.031	19 4 27.3	7.57	9	7 55 4.91	21.517	17 55 45.5	36.49
10	6 14 57.14	21.044	19 5 10.0	6.68	10	7 57 14.03	21.523	17 52 3.8	37.41
11	6 17 3.45	21.058	19 5 47.4	5.79	11	7 59 23.19	21.530	17 48 16.6	38.33
12	6 19 9.83	21.070	19 6 19.5	4.89	12	8 1 32.39	21.537	17 44 23.9	39.25
13	6 21 16.29	21.083	19 6 46.1	3.99	13	8 3 41.63	21.543	17 40 25.6	40.18
14	6 23 22.82	21.095	19 7 7.4	3.10	14	8 5 50.91	21.551	17 36 21.7	41.10
15	6 25 29.43	21.108	19 7 23.3	2.20	15	8 8 0.24	21.558	17 32 12.4	42.02
16	6 27 36.12	21.121	19 7 33.8	1.30	16	8 10 9.60	21.564	17 27 57.5	42.94
17	6 29 42.88	21.133	19 7 38.9	0.40	17	8 12 19.01	21.571	17 23 37.1	43.86
18	6 31 49.72	21.145	19 7 38.6	0.51	18	8 14 28.45	21.577	17 19 11.2	44.78
19	6 33 56.62	21.157	19 7 32.8	1.42	19	8 16 37.93	21.583	17 14 39.8	45.68
20	6 36 3.60	21.169	19 7 21.6	2.33	20	8 18 47.45	21.589	17 10 3.0	46.60
21	6 38 10.65	21.181	19 7 4.9	3.23	21	8 20 57.00	21.595	17 5 20.6	47.52
22	6 40 17.77	21.193	19 6 42.8	4.14	22	8 23 6.59	21.602	17 0 32.8	48.43
23	6 42 24.96	21.204	19 6 15.2	5.05	23	8 25 16.22	21.608	16 55 39.5	49.34
24	6 44 32.22	21.216	N.19 5 42.2	5.97	24	8 27 25.89	21.614	N.16 50 40.7	50.25

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
SUNDAY 13.					TUESDAY 15.				
	h m s	s	N. 16 50 40.7	50.25		h m s	s	N. 11 9 54.7	90.32
0	8 27 25.89	21.614	16 45 36.5	51.15	0	10 11 52.02	21.920	11 0 50.6	91.05
1	8 29 35.59	21.620	16 40 26.9	52.06	1	10 14 3.56	21.928	10 51 42.1	91.77
2	8 31 45.33	21.626	16 35 11.8	52.96	2	10 16 15.16	21.938	10 42 29.4	92.48
3	8 33 55.10	21.632	16 29 51.4	53.85	3	10 18 26.81	21.947	10 33 12.4	93.18
4	8 36 4.91	21.638	16 24 25.6	54.76	4	10 20 38.52	21.955	10 23 51.2	93.88
5	8 38 14.75	21.643	16 18 54.3	55.66	5	10 22 50.27	21.964	10 14 25.8	94.58
6	8 40 24.63	21.649	16 13 17.7	56.55	6	10 25 2.09	21.974	10 4 56.3	95.27
7	8 42 34.54	21.655	16 7 35.7	57.44	7	10 27 13.96	21.983	9 55 22.6	95.95
8	8 44 44.49	21.661	16 1 48.4	58.33	8	10 29 25.89	21.993	9 45 44.9	96.62
9	8 46 54.47	21.667	15 55 55.7	59.22	9	10 31 37.88	22.003	9 36 3.2	97.28
10	8 49 4.49	21.673	15 49 57.8	60.10	10	10 33 49.93	22.013	9 26 17.5	97.94
11	8 51 14.54	21.678	15 43 54.5	60.99	11	10 36 2.04	22.024	9 16 27.9	98.59
12	8 53 24.62	21.683	15 37 45.9	61.87	12	10 38 14.22	22.035	9 6 34.4	99.24
13	8 55 34.74	21.689	15 31 32.1	62.74	13	10 40 26.46	22.045	8 56 37.0	99.88
14	8 57 44.89	21.695	15 25 13.0	63.62	14	10 42 38.76	22.056	8 46 35.9	100.51
15	8 59 55.08	21.701	15 18 48.7	64.49	15	10 44 51.13	22.068	8 36 30.9	101.13
16	9 2 5.30	21.707	15 12 19.1	65.36	16	10 47 3.57	22.079	8 26 22.3	101.74
17	9 4 15.56	21.712	15 5 44.4	66.22	17	10 49 16.08	22.091	8 16 10.0	102.34
18	9 6 25.84	21.718	14 59 4.5	67.08	18	10 51 28.66	22.103	8 5 54.2	102.94
19	9 8 36.17	21.724	14 52 19.4	67.95	19	10 53 41.31	22.115	7 55 34.7	103.54
20	9 10 46.53	21.729	14 45 29.1	68.80	20	10 55 54.04	22.128	7 45 11.7	104.12
21	9 12 56.92	21.735	14 38 33.8	69.65	21	10 58 6.84	22.140	7 34 45.3	104.69
22	9 15 7.35	21.741	N. 14 31 33.3	70.50	22	11 0 19.72	22.153	7 24 15.4	105.26
23	9 17 17.81	21.747			23	11 2 32.67	22.166		
MONDAY 14.					WEDNESDAY 16.				
0	9 19 28.31	21.753	14 17 17.2	71.34	0	11 4 45.71	22.179	7 13 42.2	105.82
1	9 21 38.84	21.758	14 10 1.5	72.19	1	11 6 58.82	22.193	7 3 5.6	106.36
2	9 23 49.41	21.765	14 2 40.9	73.03	2	11 9 12.02	22.207	6 52 25.9	106.89
3	9 26 0.02	21.771	13 55 15.2	74.69	3	11 11 25.30	22.221	6 41 42.9	107.43
4	9 28 10.66	21.777	13 47 44.6	75.52	4	11 13 38.67	22.236	6 30 56.7	107.95
5	9 30 21.34	21.783	13 40 9.0	76.33	5	11 15 52.13	22.250	6 20 7.5	108.46
6	9 32 32.06	21.789	13 32 28.6	77.15	6	11 18 5.67	22.264	6 9 15.2	108.96
7	9 34 42.81	21.795	13 24 43.2	77.98	7	11 20 19.30	22.280	5 58 20.0	109.45
8	9 36 53.60	21.803	13 16 52.9	78.78	8	11 22 33.03	22.297	5 47 21.8	109.93
9	9 39 4.44	21.809	13 8 57.9	79.58	9	11 24 46.85	22.312	5 36 20.8	110.41
10	9 41 15.31	21.815	13 0 58.0	80.38	10	11 27 0.77	22.328	5 25 16.9	110.88
11	9 43 26.22	21.822	12 52 53.3	81.18	11	11 29 14.78	22.343	5 14 10.3	111.33
12	9 45 37.17	21.828	12 44 43.8	81.97	12	11 31 28.89	22.360	5 3 1.0	111.78
13	9 47 48.16	21.836	12 28 10.8	83.53	13	11 33 43.10	22.378	4 51 49.0	112.21
14	9 49 59.20	21.843	12 19 47.3	84.31	14	11 35 57.42	22.395	4 40 34.5	112.63
15	9 52 10.28	21.850	12 11 19.1	85.08	15	11 38 11.84	22.412	4 29 17.5	113.03
16	9 54 21.40	21.857	12 2 46.3	85.85	16	11 40 26.36	22.429	4 17 58.1	113.44
17	9 56 32.56	21.864	11 54 8.9	86.61	17	11 42 40.99	22.448	4 6 36.2	113.84
18	9 58 43.77	21.873	11 45 27.0	87.36	18	11 44 55.73	22.466	3 55 12.0	114.22
19	10 0 55.03	21.880	11 36 40.6	88.11	19	11 47 10.58	22.485	3 43 45.6	114.58
20	10 3 6.33	21.888	11 27 49.7	88.85	20	11 49 25.55	22.504	3 32 17.1	114.93
21	10 5 17.68	21.896	11 18 54.4	89.58	21	11 51 40.63	22.523	3 20 46.4	115.29
22	10 7 29.08	21.903			22	11 53 55.82	22.542	3 9 13.6	115.63
23	10 9 40.52	21.912			23	11 56 11.13	22.563	2 57 38.9	115.94
24	10 11 52.02	21.920	N. 11 9 54.7	90.32	24	11 58 26.57	22.583	N. 2 46 2.3	116.26

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in rom.	Declination.	Var. in rom.	Hour.	Right Ascension.	Var. in rom.	Declination.	Var. in rom.		
THURSDAY 17.					SATURDAY 19.						
	h m s	s				h m s	s				
0	11 58 26	57	22.583	N. 2 46' 2.3	116.26	0	13 49 42	09	23.873	S. 6 43' 27.3	115.61
1	12 0 42	12	22.603	2 34 23.8	116.57	1	13 52 5	42	23.904	6 54 59.9	115.23
2	12 2 57	80	22.624	2 22 43.5	116.85	2	13 54 28	94	23.936	7 6 30.1	114.84
3	12 5 13	61	22.645	2 11 1.6	117.13	3	13 56 52	65	23.968	7 17 58.0	114.44
4	12 7 29	54	22.666	1 59 18.0	117.39	4	13 59 16	56	24.001	7 29 23.4	114.02
5	12 9 45	60	22.688	1 47 32.9	117.64	5	14 1 40	66	24.033	7 40 46.2	113.58
6	12 12 1	79	22.709	1 35 46.3	117.88	6	14 4 4	95	24.065	7 52 6.4	113.13
7	12 14 18	11	22.732	1 23 58.3	118.12	7	14 6 29	44	24.098	8 3 23.8	112.66
8	12 16 34	57	22.755	1 12 8.9	118.33	8	14 8 54	13	24.131	8 14 38.3	112.18
9	12 18 51	16	22.777	1 0 18.3	118.53	9	14 11 19	01	24.163	8 25 49.9	111.68
10	12 21 7	89	22.800	0 48 26.5	118.73	10	14 13 44	08	24.196	8 36 58.4	111.16
11	12 23 24	76	22.824	0 36 33.6	118.90	11	14 16 9	36	24.228	8 48 3.8	110.63
12	12 25 41	78	22.848	0 24 39.7	119.07	12	14 18 34	82	24.260	8 59 6.0	110.08
13	12 27 58	93	22.871	0 12 44.8	119.23	13	14 21 0	48	24.293	9 10 4.8	109.53
14	12 30 16	23	22.896	N. 0 0 49.0	119.36	14	14 23 26	34	24.326	9 21 0.3	108.95
15	12 32 33	68	22.920	S. 0 11 7.5	119.48	15	14 25 52	39	24.358	9 31 52.2	108.35
16	12 34 51	27	22.945	0 23 4.8	119.59	16	14 28 18	64	24.391	9 42 40.5	107.74
17	12 37 9	02	22.971	0 35 2.6	119.69	17	14 30 45	08	24.423	9 53 25.1	107.13
18	12 39 26	92	22.996	0 47 1.1	119.78	18	14 33 11	72	24.456	10 4 6.0	106.48
19	12 41 44	97	23.021	0 59 0.0	119.85	19	14 35 38	55	24.488	10 14 42.9	105.83
20	12 44 3	17	23.048	1 10 59.3	119.92	20	14 38 5	57	24.519	10 25 15.9	105.17
21	12 46 21	54	23.074	1 22 59.0	119.96	21	14 40 32	78	24.551	10 35 44.9	104.48
22	12 48 40	06	23.100	1 34 58.8	119.98	22	14 43 0	18	24.583	10 46 9.6	103.78
23	12 50 58	74	23.128	S. 1 46 58.8	120.00	23	14 45 27	78	24.616	S. 10 56 30.2	103.07
FRIDAY 18.					SUNDAY 20.						
0	12 53 17	59	23.154	S. 1 58 58.8	120.00	0	14 47 55	57	24.647	S. 11 6 46.4	102.33
1	12 55 36	59	23.181	2 10 58.8	119.99	1	14 50 23	54	24.678	11 16 58.2	101.58
2	12 57 55	76	23.209	2 22 58.7	119.96	2	14 52 51	71	24.710	11 27 5.4	100.83
3	13 0 15	10	23.238	2 34 58.3	119.92	3	14 55 20	06	24.740	11 37 8.1	100.06
4	13 2 34	61	23.266	2 46 57.7	119.87	4	14 57 48	59	24.771	11 47 6.1	99.27
5	13 4 54	29	23.293	2 58 56.7	119.80	5	15 0 17	31	24.802	11 56 59.3	98.47
6	13 7 14	13	23.322	3 10 55.3	119.72	6	15 2 46	21	24.833	12 6 47.7	97.65
7	13 9 34	15	23.352	3 22 53.3	119.61	7	15 5 15	30	24.863	12 16 31.1	96.82
8	13 11 54	35	23.381	3 34 50.6	119.50	8	15 7 44	56	24.892	12 26 9.5	95.98
9	13 14 14	72	23.409	3 46 47.3	119.38	9	15 10 14	00	24.922	12 35 42.8	95.12
10	13 16 35	26	23.438	3 58 43.1	119.22	10	15 12 43	62	24.951	12 45 10.9	94.24
11	13 18 55	98	23.469	4 10 37.9	119.06	11	15 15 13	41	24.980	12 54 33.7	93.35
12	13 21 16	89	23.499	4 22 31.8	118.89	12	15 17 43	38	25.008	13 3 51.1	92.44
13	13 23 37	97	23.528	4 34 24.6	118.71	13	15 20 13	51	25.037	13 13 3.0	91.53
14	13 25 59	23	23.559	4 46 16.3	118.50	14	15 22 43	82	25.065	13 22 9.5	90.61
15	13 28 20	68	23.590	4 58 6.6	118.28	15	15 25 14	29	25.093	13 31 10.3	89.67
16	13 30 42	31	23.621	5 9 55.6	118.04	16	15 27 44	93	25.119	13 40 5.5	88.72
17	13 33 4	13	23.652	5 21 43.1	117.79	17	15 30 15	72	25.146	13 48 54.9	87.74
18	13 35 26	13	23.682	5 33 29.1	117.53	18	15 32 46	68	25.173	13 57 38.4	86.76
19	13 37 48	31	23.713	5 45 13.5	117.25	19	15 35 17	79	25.198	14 6 16.0	85.78
20	13 40 10	69	23.746	5 56 56.1	116.95	20	15 37 49	06	25.224	14 14 47.7	84.77
21	13 42 33	26	23.777	6 8 36.9	116.63	21	15 40 20	48	25.249	14 23 13.2	83.75
22	13 44 56	01	23.808	6 20 15.7	116.31	22	15 42 52	05	25.273	14 31 32.7	82.73
23	13 47 18	95	23.840	6 31 52.6	115.97	23	15 45 23	76	25.297	14 39 45.9	81.68
24	13 49 42	09	23.873	S. 6 43 27.3	115.61	24	15 47 55	62	25.321	S. 14 47 52.9	80.63

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
MONDAY 21.					WEDNESDAY 23.				
	h m s	s	S. 14 47 52.9	80.63		h m s	s	S. 18 56 44.1	20.81
0	15 47 55.62	25.321	14 47 52.9	80.63	0	17 50 55.32	25.626	18 56 44.1	20.81
1	15 50 27.61	25.343	14 55 53.4	79.56	1	17 53 29.03	25.612	18 58 44.9	19.47
2	15 52 59.74	25.367	15 3 47.6	78.49	2	17 56 2.66	25.598	19 0 37.7	18.13
3	15 55 32.01	25.389	15 11 35.3	77.41	3	17 58 36.20	25.583	19 2 22.5	16.80
4	15 58 4.41	25.410	15 19 16.5	76.31	4	18 1 9.65	25.566	19 3 59.3	15.47
5	16 0 36.93	25.431	15 26 51.0	75.19	5	18 3 42.99	25.548	19 5 28.1	14.13
6	16 3 9.58	25.451	15 34 18.8	74.08	6	18 6 16.22	25.530	19 6 48.9	12.80
7	16 5 42.34	25.470	15 41 39.9	72.95	7	18 8 49.35	25.511	19 8 1.7	11.47
8	16 8 15.22	25.490	15 48 54.2	71.82	8	18 11 22.35	25.490	19 9 6.5	10.14
9	16 10 48.22	25.508	15 56 1.7	70.67	9	18 13 55.23	25.469	19 10 3.4	8.83
10	16 13 21.32	25.525	16 3 2.2	69.50	10	18 16 27.98	25.448	19 10 52.4	7.50
11	16 15 54.52	25.543	16 9 55.7	68.33	11	18 19 0.61	25.426	19 11 33.4	6.18
12	16 18 27.83	25.559	16 16 42.2	67.16	12	18 21 33.09	25.402	19 12 6.5	4.86
13	16 21 1.23	25.575	16 23 21.6	65.98	13	18 24 5.43	25.378	19 12 31.7	3.55
14	16 23 34.73	25.590	16 29 53.9	64.78	14	18 26 37.62	25.353	19 12 49.1	2.24
15	16 26 8.31	25.604	16 36 19.0	63.58	15	18 29 9.67	25.327	19 12 58.6	0.93
16	16 28 41.98	25.618	16 42 36.8	62.37	16	18 31 41.55	25.301	19 13 0.3	0.37
17	16 31 15.73	25.631	16 48 47.4	61.15	17	18 34 13.28	25.274	19 12 54.2	1.67
18	16 33 49.55	25.643	16 54 50.6	59.92	18	18 36 44.84	25.246	19 12 40.3	2.97
19	16 36 23.45	25.655	17 0 46.4	58.68	19	18 39 16.23	25.217	19 12 18.6	4.25
20	16 38 57.41	25.665	17 6 34.8	57.45	20	18 41 47.44	25.188	19 11 49.3	5.53
21	16 41 31.43	25.675	17 12 15.8	56.20	21	18 44 18.48	25.158	19 11 12.2	6.82
22	16 44 5.51	25.684	17 17 49.2	54.94	22	18 46 49.33	25.126	19 10 27.5	8.08
23	16 46 39.64	25.692	S. 17 23 15.1	53.68	23	18 49 19.99	25.094	S. 19 9 35.2	9.35
TUESDAY 22.					THURSDAY 24.				
	h m s	s	S. 17 28 33.3	52.41		h m s	s	S. 19 8 35.3	10.62
0	16 49 13.81	25.699	17 28 33.3	52.41	0	18 51 50.46	25.063	19 8 35.3	10.62
1	16 51 48.03	25.707	17 33 44.0	51.14	1	18 54 20.74	25.029	19 7 27.8	11.88
2	16 54 22.29	25.713	17 38 47.0	49.86	2	18 56 50.81	24.995	19 6 12.8	13.13
3	16 56 56.58	25.718	17 43 42.3	48.57	3	18 59 20.68	24.961	19 4 50.3	14.38
4	16 59 30.90	25.723	17 48 29.8	47.28	4	19 1 50.34	24.926	19 3 20.3	15.62
5	17 2 5.25	25.726	17 53 9.6	45.99	5	19 4 19.79	24.890	19 1 42.9	16.85
6	17 4 39.61	25.728	17 57 41.7	44.69	6	19 6 49.02	24.854	18 59 58.1	18.08
7	17 7 13.98	25.730	18 2 5.9	43.38	7	19 9 18.04	24.818	18 58 6.0	19.29
8	17 9 48.37	25.731	18 6 22.3	42.08	8	19 11 46.83	24.779	18 56 6.6	20.50
9	17 12 22.75	25.730	18 10 30.8	40.76	9	19 14 15.39	24.741	18 54 0.0	21.71
10	17 14 57.13	25.730	18 14 31.4	39.45	10	19 16 43.72	24.703	18 51 46.1	22.91
11	17 17 31.51	25.728	18 18 24.2	38.13	11	19 19 11.82	24.664	18 49 25.1	24.10
12	17 20 5.87	25.725	18 22 9.0	36.80	12	19 21 39.69	24.624	18 46 56.9	25.28
13	17 22 40.21	25.722	18 25 45.8	35.48	13	19 24 7.31	24.583	18 44 21.7	26.46
14	17 25 14.53	25.718	18 29 14.8	34.16	14	19 26 34.69	24.542	18 41 39.4	27.63
15	17 27 48.83	25.713	18 32 35.7	32.83	15	19 29 1.82	24.502	18 38 50.1	28.79
16	17 30 23.09	25.707	18 35 48.7	31.49	16	19 31 28.71	24.460	18 35 53.9	29.94
17	17 32 57.31	25.699	18 38 53.6	30.16	17	19 33 55.34	24.418	18 32 50.8	31.09
18	17 35 31.48	25.692	18 41 50.6	28.83	18	19 36 21.72	24.375	18 29 40.8	32.23
19	17 38 5.61	25.683	18 44 39.5	27.49	19	19 38 47.84	24.333	18 26 24.1	33.35
20	17 40 39.68	25.673	18 47 20.5	26.16	20	19 41 13.71	24.289	18 23 0.6	34.48
21	17 43 13.69	25.663	18 49 53.4	24.82	21	19 43 39.31	24.244	18 19 30.4	35.58
22	17 45 47.64	25.653	18 52 18.3	23.48	22	19 46 4.64	24.200	18 15 53.6	36.68
23	17 48 21.52	25.640	18 54 35.2	22.15	23	19 48 29.71	24.156	18 12 10.2	37.77
24	17 50 55.32	25.626	S. 18 56 44.1	20.81	24	19 50 54.51	24.111	S. 18 8 20.2	38.87

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
FRIDAY 25.					SUNDAY 27.				
	h m s	s	S. 18° 8' 20.2	38.87		h m s	s	S. 13° 14' 43.1	79.73
0	19 50 54.51	24.111	18 8 20.2	38.87	0	21 41 8.10	21.817	13 14 43.1	79.73
1	19 53 19.04	24.065	18 4 23.8	39.94	1	21 43 18.87	21.772	13 6 42.9	80.33
2	19 55 43.29	24.019	18 0 20.9	41.02	2	21 45 29.36	21.726	12 58 39.1	80.93
3	19 58 7.27	23.974	17 56 11.6	42.08	3	21 47 39.58	21.681	12 50 31.7	81.53
4	20 0 30.98	23.928	17 51 56.0	43.12	4	21 49 49.53	21.636	12 42 20.8	82.11
5	20 2 54.40	23.881	17 47 34.2	44.16	5	21 51 59.21	21.592	12 34 6.4	82.68
6	20 5 17.55	23.834	17 43 6.1	45.19	6	21 54 8.63	21.548	12 25 48.6	83.24
7	20 7 40.41	23.787	17 38 31.9	46.21	7	21 56 17.79	21.504	12 17 27.5	83.80
8	20 10 2.99	23.739	17 33 51.6	47.23	8	21 58 26.68	21.461	12 9 3.0	84.35
9	20 12 25.28	23.692	17 29 5.2	48.23	9	22 0 35.32	21.418	12 0 35.3	84.88
10	20 14 47.29	23.645	17 24 12.8	49.23	10	22 2 43.70	21.375	11 52 4.4	85.41
11	20 17 9.02	23.597	17 19 14.5	50.20	11	22 4 51.82	21.333	11 43 30.4	85.93
12	20 19 30.45	23.548	17 14 10.4	51.18	12	22 6 59.69	21.291	11 34 53.3	86.43
13	20 21 51.60	23.501	17 9 0.4	52.15	13	22 9 7.31	21.249	11 26 13.1	86.94
14	20 24 12.46	23.452	17 3 44.6	53.10	14	22 11 14.68	21.208	11 17 30.0	87.43
15	20 26 33.02	23.403	16 58 23.2	54.04	15	22 13 21.80	21.167	11 8 44.0	87.90
16	20 28 53.30	23.355	16 52 56.1	54.98	16	22 15 28.68	21.126	10 59 55.2	88.38
17	20 31 13.28	23.306	16 47 23.4	55.91	17	22 17 35.31	21.085	10 51 3.5	88.85
18	20 33 32.97	23.258	16 41 45.2	56.83	18	22 19 41.70	21.045	10 42 9.0	89.30
19	20 35 52.37	23.209	16 36 1.5	57.73	19	22 21 47.85	21.006	10 33 11.9	89.74
20	20 38 11.48	23.160	16 30 12.4	58.63	20	22 23 53.77	20.968	10 24 12.1	90.18
21	20 40 30.29	23.110	16 24 18.0	59.51	21	22 25 59.46	20.928	10 15 9.7	90.61
22	20 42 48.80	23.062	16 18 18.3	60.39	22	22 28 4.91	20.889	10 6 4.8	91.03
23	20 45 7.03	23.013	S. 16 12 13.3	61.26	23	22 30 10.13	20.852	S. 9 56 57.4	91.44
SATURDAY 26.					MONDAY 28.				
	h m s	s	S. 16° 6' 3.2	62.11		h m s	s	S. 9° 47' 47.5	91.84
0	20 47 24.96	22.963	16 6 3.2	62.11	0	22 32 15.13	20.814	9 47 47.5	91.84
1	20 49 42.59	22.914	15 59 48.0	62.96	1	22 34 19.90	20.777	9 38 35.3	92.23
2	20 51 59.93	22.866	15 53 27.7	63.80	2	22 36 24.45	20.740	9 29 20.7	92.62
3	20 54 16.98	22.817	15 47 2.4	64.63	3	22 38 28.78	20.703	9 20 3.9	92.99
4	20 56 33.73	22.768	15 40 32.2	65.43	4	22 40 32.89	20.668	9 10 44.8	93.36
5	20 58 50.19	22.718	15 33 57.2	66.24	5	22 42 36.79	20.633	9 1 23.6	93.72
6	21 1 6.35	22.670	15 27 17.3	67.05	6	22 44 40.48	20.598	8 52 0.2	94.08
7	21 3 22.23	22.622	15 20 32.6	67.84	7	22 46 43.96	20.563	8 42 34.7	94.42
8	21 5 37.81	22.573	15 13 43.2	68.61	8	22 48 47.23	20.527	8 33 7.2	94.74
9	21 7 53.10	22.524	15 6 49.3	69.38	9	22 50 50.29	20.493	8 23 37.8	95.07
10	21 10 8.10	22.476	14 59 50.7	70.14	10	22 52 53.15	20.461	8 14 6.4	95.39
11	21 12 22.81	22.428	14 52 47.6	70.89	11	22 54 55.82	20.428	8 4 33.1	95.69
12	21 14 37.23	22.379	14 45 40.0	71.63	12	22 56 58.28	20.394	7 54 58.1	95.99
13	21 16 51.36	22.332	14 38 28.0	72.35	13	22 59 0.55	20.363	7 45 21.2	96.29
14	21 19 5.21	22.284	14 31 11.8	73.07	14	23 1 2.64	20.332	7 35 42.6	96.57
15	21 21 18.77	22.236	14 23 51.2	73.78	15	23 3 4.53	20.299	7 26 2.4	96.84
16	21 23 32.04	22.188	14 16 26.4	74.48	16	23 5 6.23	20.268	7 16 20.5	97.12
17	21 25 45.03	22.142	14 8 57.5	75.17	17	23 7 7.75	20.238	7 6 37.0	97.38
18	21 27 57.74	22.094	14 1 24.4	75.85	18	23 9 9.09	20.208	6 56 52.0	97.63
19	21 30 10.16	22.048	13 53 47.3	76.52	19	23 11 10.25	20.179	6 47 5.5	97.87
20	21 32 22.31	22.001	13 46 6.2	77.18	20	23 13 11.24	20.150	6 37 17.6	98.10
21	21 34 34.17	21.954	13 38 21.2	77.83	21	23 15 12.05	20.121	6 27 28.3	98.33
22	21 36 45.76	21.908	13 30 32.3	78.47	22	23 17 12.69	20.093	6 17 37.7	98.55
23	21 38 57.07	21.862	13 22 30.6	79.10	23	23 19 13.17	20.066	6 7 45.7	98.77
24	21 41 8.10	21.817	S. 13 14 43.1	79.73	24	23 21 13.48	20.038	S. 5 57 52.5	98.97

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
TUESDAY 29.					WEDNESDAY 30.				
	h m s	s				h m s	s		
0	23 21 13.48	20.038	S. 5 57 52.5	98.97	0	0 8 38.48	19.519	S. 1 56 19.1	101.63
1	23 23 13.62	20.011	5 47 58.1	99.16	1	0 10 35.55	19.504	1 46 9.3	101.64
2	23 25 13.61	19.985	5 38 2.6	99.35	2	0 12 32.53	19.488	1 35 59.4	101.66
3	23 27 13.44	19.959	5 28 5.9	99.53	3	0 14 29.41	19.473	1 25 49.4	101.67
4	23 29 13.12	19.934	5 18 8.2	99.71	4	0 16 26.20	19.458	1 15 39.4	101.66
5	23 31 12.65	19.908	5 8 9.4	99.88	5	0 18 22.91	19.444	1 5 29.5	101.65
6	23 33 12.02	19.884	4 58 9.7	100.03	6	0 20 19.53	19.430	0 55 19.6	101.64
7	23 35 11.26	19.861	4 48 9.1	100.18	7	0 22 16.07	19.417	0 45 9.8	101.62
8	23 37 10.35	19.836	4 38 7.6	100.33	8	0 24 12.53	19.404	0 35 0.2	101.59
9	23 39 9.29	19.813	4 28 5.2	100.47	9	0 26 8.92	19.392	0 24 50.7	101.56
10	23 41 8.10	19.791	4 18 2.0	100.59	10	0 28 5.23	19.379	0 14 41.5	101.52
11	23 43 6.78	19.768	4 7 58.1	100.71	11	0 30 1.47	19.368	S. 0 4 32.5	101.47
12	23 45 5.32	19.746	3 57 53.5	100.83	12	0 31 57.64	19.357	N. 0 5 36.1	101.41
13	23 47 3.73	19.725	3 47 48.2	100.93	13	0 33 53.75	19.346	0 15 44.4	101.35
14	23 49 2.02	19.704	3 37 42.3	101.02	14	0 35 49.79	19.336	0 25 52.3	101.28
15	23 51 0.18	19.683	3 27 35.9	101.12	15	0 37 45.78	19.326	0 35 59.8	101.21
16	23 52 58.22	19.663	3 17 28.9	101.21	16	0 39 41.70	19.316	0 46 6.8	101.13
17	23 54 56.14	19.643	3 7 21.4	101.28	17	0 41 37.57	19.308	0 56 13.3	101.03
18	23 56 53.94	19.624	2 57 13.5	101.35	18	0 43 33.39	19.298	1 6 19.2	100.94
19	23 58 51.63	19.606	2 47 5.2	101.42	19	0 45 29.15	19.290	1 16 24.6	100.84
20	0 0 49.21	19.588	2 36 56.5	101.48	20	0 47 24.87	19.283	1 26 29.3	100.73
21	0 2 46.69	19.570	2 26 47.5	101.53	21	0 49 20.54	19.275	1 36 33.3	100.61
22	0 4 44.05	19.553	2 16 38.2	101.56	22	0 51 16.17	19.268	1 46 36.6	100.49
23	0 6 41.32	19.536	2 6 28.8	101.59	23	0 53 11.76	19.262	1 56 39.2	100.37
24	0 8 38.48	19.519	S. 1 56 19.1	101.63	24	0 55 7.31	19.256	N. 2 6 41.0	100.23

PHASES OF THE MOON.

Apr. 3	● New Moon	- - - - -	h m
11	) First Quarter	- - - - -	23 12.1
19	○ Full Moon	- - - - -	2 10.7
25	☾ Last Quarter	- - - - -	16 28.1
Apr. 8	☾ Apogee	- - - - -	h
20	☾ Perigee	- - - - -	3.2
		- - - - -	8.3

AT APPARENT NOON.

Date.	THE SUN'S				Sidereal Time of the Semi- diameter passing the Meridian.*	Equation of Time, to be subtracted from Apparent Time.	Var. in hour
	Apparent Right Ascension.	Var. in hour.	Apparent Declination.	Var. in hour.			
	h m s	s	N. ° ' "	"	m s	m s	s
Thur.	1 2 33 35.06	9.547	N. 15 4 34.4	45.38	1 6.01	2 57.15	0.308
Frid.	2 2 37 24.47	9.570	15 22 36.0	44.75	1 6.09	3 4.28	0.286
Sat.	3 2 41 14.43	9.593	15 40 22.5	44.11	1 6.17	3 10.86	0.263
Sun.	4 2 45 4.04	9.616	15 57 53.4	43.46	1 6.25	3 16.89	0.240
Mon.	5 2 48 56.00	9.639	16 15 8.5	42.79	1 6.33	3 22.36	0.216
Tues.	6 2 52 47.62	9.662	16 32 7.5	42.11	1 6.41	3 27.28	0.194
Wed.	7 2 56 39.80	9.686	16 48 49.9	41.42	1 6.49	3 31.65	0.170
Thur.	8 3 0 32.54	9.709	17 5 15.5	40.71	1 6.58	3 35.45	0.147
Frid.	9 3 4 25.84	9.732	17 21 24.0	39.99	1 6.66	3 38.70	0.124
Sat.	10 3 8 19.69	9.756	17 37 15.1	39.26	1 6.74	3 41.39	0.101
Sun.	11 3 12 14.11	9.779	17 52 48.5	38.52	1 6.82	3 43.53	0.078
Mon.	12 3 16 9.08	9.802	18 8 3.9	37.76	1 6.91	3 45.11	0.054
Tues.	13 3 20 4.61	9.825	18 23 0.9	36.99	1 6.99	3 46.13	0.031
Wed.	14 3 24 0.69	9.848	18 37 39.3	36.21	1 7.07	3 46.60	0.008
Thur.	15 3 27 57.32	9.871	18 51 58.8	35.41	1 7.15	3 46.52	0.015
Frid.	16 3 31 54.51	9.895	19 5 59.2	34.61	1 7.23	3 45.89	0.038
Sat.	17 3 35 52.26	9.918	19 19 40.1	33.79	1 7.31	3 44.70	0.061
Sun.	18 3 39 50.55	9.941	19 33 1.3	32.97	1 7.39	3 42.97	0.084
Mon.	19 3 43 49.41	9.964	19 46 2.7	32.14	1 7.47	3 40.68	0.107
Tues.	20 3 47 48.82	9.987	19 58 43.8	31.29	1 7.55	3 37.83	0.130
Wed.	21 3 51 48.78	10.010	20 11 4.5	30.43	1 7.62	3 34.43	0.153
Thur.	22 3 55 49.29	10.033	20 23 4.6	29.57	1 7.70	3 30.49	0.176
Frid.	23 3 59 50.34	10.055	20 34 43.9	28.70	1 7.77	3 26.00	0.198
Sat.	24 4 3 51.94	10.077	20 46 2.0	27.81	1 7.84	3 20.98	0.220
Sun.	25 4 7 54.06	10.099	20 56 58.8	26.92	1 7.91	3 15.43	0.242
Mon.	26 4 11 56.71	10.121	21 7 34.0	26.01	1 7.98	3 9.36	0.264
Tues.	27 4 15 59.86	10.141	21 17 47.4	25.10	1 8.05	3 2.78	0.284
Wed.	28 4 20 3.50	10.162	21 27 38.9	24.18	1 8.11	2 55.71	0.304
Thur.	29 4 24 7.62	10.181	21 37 8.1	23.25	1 8.18	2 48.17	0.324
Frid.	30 4 28 12.20	10.200	21 46 14.8	22.31	1 8.24	2 40.17	0.343
Sat.	31 4 32 17.22	10.218	21 54 59.0	21.36	1 8.30	2 31.73	0.361
Sun.	32 4 36 22.67	10.235	N. 22 3 20.3	20.41	1 8.35	2 22.86	0.378

* Mean Time of the Semidiameter passing may be found by subtracting 0.18 from the Sidereal Time.

AT MEAN NOON.

Date.		THE SUN'S			Equation of Time, to be subtracted from Apparent Time.	Sidereal Time.
		Apparent Right Ascension.	Apparent Declination.	Semi-diameter.*		
		h m s	N. ° ' "	' "	m s	h m s
Thur.	1	2 33 35.53	N. 15 4 36.6	15 53.56	2 57.17	2 36 32.70
Frid.	2	2 37 24.96	15 22 38.3	15 53.32	3 4.30	2 40 29.25
Sat.	3	2 41 14.94	15 40 24.8	15 53.08	3 10.87	2 44 25.81
Sun.	4	2 45 5.46	15 57 55.8	15 52.85	3 16.90	2 48 22.36
Mon.	5	2 48 56.54	16 15 10.9	15 52.62	3 22.37	2 52 18.92
Tues.	6	2 52 48.18	16 32 9.9	15 52.40	3 27.29	2 56 15.47
Wed.	7	2 56 40.37	16 48 52.3	15 52.18	3 31.65	3 0 12.03
Thur.	8	3 0 33.12	17 5 18.0	15 51.96	3 35.46	3 4 8.58
Frid.	9	3 4 26.43	17 21 26.5	15 51.75	3 38.71	3 8 5.14
Sat.	10	3 8 20.29	17 37 17.6	15 51.54	3 41.40	3 12 1.69
Sun.	11	3 12 14.71	17 52 50.9	15 51.33	3 43.53	3 15 58.25
Mon.	12	3 16 9.69	18 8 6.2	15 51.13	3 45.11	3 19 54.80
Tues.	13	3 20 5.22	18 23 3.2	15 50.92	3 46.13	3 23 51.36
Wed.	14	3 24 1.31	18 37 41.6	15 50.73	3 46.60	3 27 47.91
Thur.	15	3 27 57.94	18 52 1.0	15 50.53	3 46.52	3 31 44.47
Frid.	16	3 31 55.13	19 6 1.3	15 50.34	3 45.89	3 35 41.02
Sat.	17	3 35 52.87	19 19 42.2	15 50.14	3 44.70	3 39 37.58
Sun.	18	3 39 51.17	19 33 3.4	15 49.95	3 42.96	3 43 34.13
Mon.	19	3 43 50.02	19 46 4.6	15 49.77	3 40.67	3 47 30.69
Tues.	20	3 47 49.42	19 58 45.7	15 49.58	3 37.82	3 51 27.24
Wed.	21	3 51 49.37	20 11 6.4	15 49.40	3 34.43	3 55 23.80
Thur.	22	3 55 49.87	20 23 6.4	15 49.22	3 30.48	3 59 20.35
Frid.	23	3 59 50.92	20 34 45.5	15 49.04	3 25.99	4 3 16.91
Sat.	24	4 3 52.50	20 46 3.5	15 48.86	3 20.97	4 7 13.47
Sun.	25	4 7 54.61	20 57 0.2	15 48.69	3 15.41	4 11 10.02
Mon.	26	4 11 57.24	21 7 35.4	15 48.52	3 9.34	4 15 6.58
Tues.	27	4 16 0.37	21 17 48.7	15 48.35	3 2.76	4 19 3.13
Wed.	28	4 20 3.99	21 27 40.0	15 48.19	2 55.70	4 22 59.69
Thur.	29	4 24 8.09	21 37 9.1	15 48.03	2 48.16	4 26 56.25
Frid.	30	4 28 12.65	21 46 15.8	15 47.88	2 40.15	4 30 52.80
Sat.	31	4 32 17.65	21 54 59.9	15 47.73	2 31.71	4 34 49.36
Sun.	32	4 36 23.07	N. 22 3 21.1	15 47.59	2 22.84	4 38 45.92

* The Semidiameter for Apparent Noon may be assumed the same as that for Mean Noon.

MEAN TIME.

Day.	THE SUN'S <i>Apparent</i>		Logarithm of the Radius Vector of the Earth.	Transit of the First Point of Aries.	THE MOON'S			
	Longitude.	Latitude.			Semidiameter.		Horizontal Parallax.	
	Noon.	Noon.			Noon.	Midnight.	Noon.	Midnight.
				h m s				
1	40° 49' 21.3	S. 0° 10'	0.0034575	21 19 57.04	14° 57' 34"	14° 54' 33"	54° 53' 38"	54° 42' 33"
2	41 47 33.6	0° 19'	.0035666	21 16 1.13	14 51.64	14 49.27	54 32.45	54 23.75
3	42 45 44.3	0° 25'	.0036740	21 12 5.22	14 47.22	14 45.49	54 16.22	54 9.88
4	43 43 53.3	0° 29'	0.0037798	21 8 9.31	14 44.10	14 43.06	54 4.78	54 0.96
5	44 42 0.6	0° 30'	.0038840	21 4 13.40	14 42.39	14 42.11	53 58.50	53 57.48
6	45 40 6.1	0° 28'	.0039864	21 0 17.50	14 42.25	14 42.84	53 57.99	54 0.14
7	46 38 9.8	0° 24'	0.0040872	20 56 21.59	14 43.90	14 45.46	54 4.03	54 9.76
8	47 36 11.8	0° 18'	.0041863	20 52 25.68	14 47.56	14 50.21	54 17.45	54 27.19
9	48 34 12.0	S. 0° 09'	.0042839	20 48 29.77	14 53.44	14 57.26	54 39.05	54 53.08
10	49 32 10.3	N. 0° 02'	0.0043799	20 44 33.86	15 1.69	15 6.72	55 9.33	55 27.78
11	50 30 6.9	0° 14'	.0044744	20 40 37.95	15 12.33	15 18.50	55 48.38	56 11.03
12	51 28 1.6	0° 27'	.0045675	20 36 42.04	15 25.19	15 32.32	56 35.56	57 1.75
13	52 25 54.5	0° 39'	0.0046592	20 32 46.13	15 39.82	15 47.59	57 29.28	57 57.77
14	53 23 45.6	0° 51'	.0047498	20 28 50.22	15 55.48	16 3.36	58 26.75	58 55.66
15	54 21 34.9	0° 61'	.0048393	20 24 54.31	16 11.04	16 18.35	59 23.87	59 50.70
16	55 19 22.6	0° 69'	0.0049278	20 20 58.40	16 25.09	16 31.07	60 15.43	60 37.35
17	56 17 8.7	0° 75'	.0050154	20 17 2.49	16 36.08	16 39.98	60 55.77	61 10.08
18	57 14 53.2	0° 78'	.0051022	20 13 6.59	16 42.63	16 43.94	61 19.80	61 24.59
19	58 12 36.4	0° 77'	0.0051881	20 9 10.68	16 43.86	16 42.41	61 24.31	61 19.00
20	59 10 18.2	0° 73'	.0052733	20 5 14.77	16 39.66	16 35.70	61 8.89	60 54.37
21	60 7 58.8	0° 66'	.0053575	20 1 18.86	16 30.69	16 24.80	60 35.99	60 14.35
22	61 5 38.4	0° 56'	0.0054407	19 57 22.95	16 18.21	16 11.11	59 50.16	59 24.11
23	62 3 16.9	0° 44'	.0055227	19 53 27.04	16 3.69	15 56.13	58 56.89	58 29.13
24	63 0 54.4	0° 31'	.0056034	19 49 31.13	15 48.57	15 41.15	58 1.39	57 34.17
25	63 58 31.0	0° 18'	0.0056826	19 45 35.22	15 33.99	15 27.17	57 7.88	56 42.85
26	64 56 6.6	N. 0° 05'	.0057602	19 41 39.31	15 20.76	15 14.82	56 19.33	55 57.50
27	65 53 41.4	S. 0° 07'	.0058360	19 37 43.40	15 9.36	15 4.42	55 37.48	55 19.34
28	66 51 15.3	0° 18'	0.0059098	19 33 47.49	14 59.99	14 56.09	55 3.11	54 48.77
29	67 48 48.3	0° 27'	.0059817	19 29 51.57	14 52.69	14 49.78	54 36.29	54 25.61
30	68 46 20.3	0° 34'	.0060514	19 25 55.66	14 47.34	14 45.36	54 16.67	54 9.39
31	69 43 51.5	0° 37'	.0061189	19 21 59.75	14 43.81	14 42.67	54 3.70	53 59.52
32	70 41 21.7	S. 0° 38'	0.0061842	19 18 3.84	14 41.93	14 41.57	53 56.80	53 55.49

MEAN TIME.

Day.	THE MOON'S						
	Longitude.		Latitude.		Age.	Meridian Passage.	
	Noon.	Midnight.	Noon.	Midnight.	Noon.	Upper.	Lower.
1	13 30 7.1	19 35 45.6	S. 3 29 32.6	S. 3 51 25.5	d 27.20	h m 22 59.0	h m 10 37.3
2	25 39 37.5	31 41 54.0	4 10 32.2	4 26 43.0	28.20	23 42.6	11 20.7
3	37 42 45.0	43 42 19.7	4 39 50.0	4 49 47.1	29.20	* *	12 4.6
4	49 40 47.0	55 38 16.1	4 56 30.0	4 59 56.6	0.54	0 26.8	12 49.3
5	61 34 57.0	67 31 0.7	5 0 6.1	4 57 0.0	1.54	1 12.0	13 34.9
6	73 26 40.2	79 22 10.4	4 50 40.6	4 41 12.5	2.54	1 58.1	14 21.6
7	85 17 48.7	91 13 54.8	4 28 41.0	4 13 13.0	3.54	2 45.3	15 9.1
8	97 10 51.6	103 9 4.2	3 54 56.5	3 34 0.6	4.54	3 33.1	15 57.3
9	109 9 1.0	115 11 12.7	3 10 35.3	2 44 52.1	5.54	4 21.5	16 45.7
10	121 16 12.3	127 24 34.7	2 17 3.4	1 47 23.2	6.54	5 10.0	17 34.3
11	133 36 56.3	139 53 53.9	1 16 6.8	S. 0 43 31.7	7.54	5 58.6	18 22.9
12	146 16 4.1	152 44 2.2	S. 0 9 57.0	N. 0 24 15.4	8.54	6 47.2	19 11.7
13	159 18 20.6	165 59 27.3	N. 0 58 41.2	1 32 53.1	9.54	7 36.3	20 1.1
14	172 47 44.8	179 43 27.2	2 6 21.2	2 38 32.7	10.54	8 26.2	20 51.6
15	186 46 38.9	193 57 12.7	3 8 52.5	3 36 43.8	11.54	9 17.5	21 44.0
16	201 14 48.1	208 38 50.9	4 1 29.6	4 22 33.9	12.54	10 11.1	22 38.8
17	216 8 32.2	223 42 49.7	4 39 23.2	4 51 29.1	13.54	11 7.3	23 36.5
18	231 20 29.2	239 0 8.1	4 58 29.5	5 0 10.5	14.54	12 6.3	* *
19	246 40 18.4	254 19 31.6	4 56 27.3	4 47 24.9	15.54	13 7.6	0 36.8
20	261 56 22.3	269 29 32.8	4 33 17.7	4 14 28.6	16.54	14 9.8	1 38.7
21	276 57 55.8	284 20 36.7	3 51 27.2	3 24 48.0	17.54	15 11.1	2 40.7
22	291 36 54.8	298 46 23.5	2 55 8.7	2 23 8.2	18.54	16 9.8	3 40.9
23	305 48 49.1	312 44 9.9	1 49 24.9	1 14 36.0	19.54	17 5.1	4 37.9
24	319 32 34.3	326 14 19.0	N. 0 39 15.9	N. 0 3 56.5	20.54	17 56.7	5 31.3
25	332 49 46.7	339 19 24.7	S. 0 30 53.6	S. 1 4 48.8	21.54	18 45.0	6 21.2
26	345 43 43.4	352 3 14.5	1 37 26.4	2 8 26.4	22.54	19 30.8	7 8.2
27	358 18 30.2	4 30 1.8	2 37 31.1	3 4 25.2	23.54	20 15.0	7 53.1
28	10 38 19.4	16 43 51.9	3 28 55.1	3 50 49.0	24.54	20 58.3	8 36.7
29	22 47 5.1	28 48 22.9	4 9 56.8	4 26 9.8	25.54	21 41.5	9 19.9
30	34 48 6.8	40 46 35.6	4 39 20.6	4 49 23.7	26.54	22 25.2	10 3.2
31	46 44 6.1	52 40 52.7	4 56 14.6	4 59 50.7	27.54	23 9.8	10 47.4
32	58 37 8.9	64 33 6.0	S. 5 0 10.6	S. 4 57 14.8	28.54	23 55.6	11 32.5

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
THURSDAY 1.					SATURDAY 3.				
	h m s	s	N. ° ' "	100 ^{''} 23		h m s	s	N. ° ' "	86 ^{''} 40
0	0 55 7.31	19.256	2 6 41.0	100.23	0	2 27 32.49	19.381	9 40 16.1	86.40
1	0 57 2.83	19.250	2 16 42.0	100.09	1	2 29 28.81	19.391	9 48 53.2	85.97
2	0 58 58.31	19.244	2 26 42.1	99.94	2	2 31 25.18	19.401	9 57 27.7	85.53
3	1 0 53.76	19.239	2 36 41.3	99.78	3	2 33 21.62	19.412	10 5 59.6	85.09
4	1 2 49.18	19.235	2 46 39.5	99.63	4	2 35 18.12	19.422	10 14 28.8	84.63
5	1 4 44.58	19.231	2 56 36.8	99.46	5	2 37 14.68	19.433	10 22 55.2	84.17
6	1 6 39.95	19.228	3 6 33.0	99.28	6	2 39 11.32	19.445	10 31 18.8	83.71
7	1 8 35.31	19.224	3 16 28.2	99.11	7	2 41 8.02	19.456	10 39 39.7	83.24
8	1 10 30.64	19.220	3 26 22.3	98.92	8	2 43 4.79	19.467	10 47 57.7	82.76
9	1 12 25.95	19.218	3 36 15.2	98.72	9	2 45 1.62	19.478	10 56 12.8	82.28
10	1 14 21.25	19.216	3 46 7.0	98.53	10	2 46 58.53	19.492	11 4 25.1	81.80
11	1 16 16.54	19.214	3 55 57.6	98.33	11	2 48 55.52	19.504	11 12 34.4	81.30
12	1 18 11.82	19.212	4 5 46.9	98.11	12	2 50 52.58	19.516	11 20 40.7	80.81
13	1 20 7.08	19.211	4 15 34.9	97.89	13	2 52 49.71	19.528	11 28 44.1	80.31
14	1 22 2.35	19.211	4 25 21.6	97.68	14	2 54 46.92	19.542	11 36 44.4	79.79
15	1 23 57.61	19.209	4 35 7.0	97.44	15	2 56 44.21	19.555	11 44 41.6	79.28
16	1 25 52.86	19.209	4 44 50.9	97.20	16	2 58 41.58	19.568	11 52 35.7	78.76
17	1 27 48.12	19.210	4 54 33.4	96.96	17	3 0 39.02	19.581	12 0 26.7	78.24
18	1 29 43.38	19.211	5 4 14.4	96.71	18	3 2 36.55	19.595	12 8 14.6	77.71
19	1 31 38.65	19.213	5 13 53.9	96.46	19	3 4 34.16	19.608	12 15 59.2	77.17
20	1 33 33.93	19.213	5 23 31.9	96.19	20	3 6 31.85	19.622	12 23 40.6	76.63
21	1 35 29.21	19.214	5 33 8.2	95.93	21	3 8 29.62	19.636	12 31 18.7	76.08
22	1 37 24.50	19.217	5 42 43.0	95.65	22	3 10 27.48	19.651	12 38 53.6	75.53
23	1 39 19.81	19.219	N. 5 52 16.0	95.37	23	3 12 25.43	19.665	N. 12 46 25.1	74.97
FRIDAY 2.					SUNDAY 4.				
	h m s	s	N. ° ' "	95.09		h m s	s	N. ° ' "	74.40
0	1 41 15.13	19.222	6 1 47.4	95.09	0	3 14 23.46	19.679	N. 12 53 53.2	74.40
1	1 43 10.47	19.226	6 11 17.1	94.79	1	3 16 21.58	19.694	13 1 17.9	73.84
2	1 45 5.84	19.229	6 20 44.9	94.49	2	3 18 19.79	19.709	13 8 39.3	73.27
3	1 47 1.22	19.232	6 30 11.0	94.19	3	3 20 18.09	19.724	13 15 57.1	72.68
4	1 48 56.62	19.236	6 39 35.2	93.88	4	3 22 16.48	19.738	13 23 11.5	72.10
5	1 50 52.05	19.241	6 48 57.5	93.56	5	3 24 14.95	19.753	13 30 22.3	71.51
6	1 52 47.51	19.246	6 58 17.9	93.24	6	3 26 13.52	19.769	13 37 29.6	70.92
7	1 54 43.00	19.251	7 7 36.4	92.91	7	3 28 12.18	19.785	13 44 33.3	70.32
8	1 56 38.52	19.256	7 16 52.8	92.58	8	3 30 10.94	19.800	13 51 33.4	69.72
9	1 58 34.07	19.262	7 26 7.3	92.23	9	3 32 9.78	19.815	13 58 29.9	69.11
10	2 0 29.66	19.268	7 35 19.6	91.88	10	3 34 8.72	19.832	14 5 22.7	68.48
11	2 2 25.28	19.274	7 44 29.9	91.53	11	3 36 7.76	19.848	14 12 11.7	67.87
12	2 4 20.95	19.281	7 53 38.0	91.18	12	3 38 6.89	19.862	14 18 57.1	67.24
13	2 6 16.65	19.287	8 2 44.0	90.82	13	3 40 6.11	19.878	14 25 38.6	66.61
14	2 8 12.39	19.294	8 11 47.8	90.44	14	3 42 5.43	19.895	14 32 16.4	65.98
15	2 10 8.18	19.302	8 20 49.3	90.06	15	3 44 4.85	19.911	14 38 50.4	65.34
16	2 12 4.01	19.309	8 29 48.5	89.68	16	3 46 4.36	19.927	14 45 20.5	64.69
17	2 13 59.89	19.318	8 38 45.4	89.29	17	3 48 3.97	19.943	14 51 46.7	64.04
18	2 15 55.82	19.325	8 47 40.0	88.90	18	3 50 3.67	19.959	14 58 9.0	63.39
19	2 17 51.79	19.333	8 56 32.2	88.49	19	3 52 3.48	19.976	15 4 27.4	62.73
20	2 19 47.82	19.343	9 5 21.9	88.08	20	3 54 3.38	19.992	15 10 41.7	62.06
21	2 21 43.91	19.353	9 14 9.2	87.68	21	3 56 3.38	20.008	15 16 52.1	61.40
22	2 23 40.05	19.361	9 22 54.1	87.27	22	3 58 3.48	20.023	15 22 58.5	60.73
23	2 25 36.24	19.370	9 31 36.4	86.83	23	4 0 3.68	20.041	15 29 0.8	60.04
24	2 27 32.49	19.381	N. 9 40 16.1	86.40	24	4 2 3.97	20.058	N. 15 34 59.0	59.36

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
MONDAY 5.					WEDNESDAY 7.				
	h m s	s	N. 15 34 59.0	59.36		h m s	s	N. 18 53 16.7	21.87
0	4 2 3.97	20.058			0	5 40 10.50	20.788		
1	4 4 4.37	20.074	15 40 53.1	58.68	1	5 42 15.26	20.800	18 55 25.3	21.00
2	4 6 4.86	20.090	15 46 43.1	57.98	2	5 44 20.10	20.813	18 57 28.7	20.14
3	4 8 5.45	20.108	15 52 28.9	57.28	3	5 46 25.01	20.824	18 59 27.0	19.28
4	4 10 6.15	20.124	15 58 10.5	56.58	4	5 48 29.99	20.836	19 1 20.1	18.41
5	4 12 6.94	20.140	16 3 47.8	55.87	5	5 50 35.04	20.848	19 3 7.9	17.53
6	4 14 7.83	20.157	16 9 20.9	55.17	6	5 52 40.16	20.859	19 4 50.5	16.67
7	4 16 8.82	20.173	16 14 49.8	54.45	7	5 54 45.35	20.870	19 6 27.9	15.80
8	4 18 9.90	20.189	16 20 14.3	53.73	8	5 56 50.60	20.881	19 8 0.1	14.93
9	4 20 11.09	20.206	16 25 34.5	53.01	9	5 58 55.92	20.892	19 9 27.0	14.04
10	4 22 12.37	20.223	16 30 50.4	52.28	10	6 1 1.30	20.903	19 10 48.6	13.16
11	4 24 13.76	20.239	16 36 1.9	51.54	11	6 3 6.75	20.913	19 12 4.9	12.28
12	4 26 15.24	20.255	16 41 8.9	50.81	12	6 5 12.26	20.923	19 13 15.9	11.39
13	4 28 16.82	20.272	16 46 11.6	50.08	13	6 7 17.83	20.934	19 14 21.6	10.51
14	4 30 18.50	20.288	16 51 9.8	49.33	14	6 9 23.47	20.944	19 15 22.0	9.63
15	4 32 20.28	20.304	16 56 3.5	48.58	15	6 11 29.16	20.953	19 16 17.1	8.73
16	4 34 22.15	20.320	17 0 52.7	47.83	16	6 13 34.91	20.963	19 17 6.8	7.84
17	4 36 24.12	20.337	17 5 37.4	47.07	17	6 15 40.71	20.972	19 17 51.2	6.95
18	4 38 26.19	20.353	17 10 17.5	46.31	18	6 17 46.57	20.981	19 18 30.2	6.05
19	4 40 28.36	20.369	17 14 53.1	45.54	19	6 19 52.48	20.990	19 19 3.8	5.16
20	4 42 30.62	20.384	17 19 24.0	44.78	20	6 21 58.45	20.999	19 19 32.1	4.27
21	4 44 32.97	20.400	17 23 50.4	44.01	21	6 24 4.47	21.008	19 19 55.0	3.37
22	4 46 35.42	20.417	17 28 12.1	43.23	22	6 26 10.54	21.016	19 20 12.5	2.48
23	4 48 37.97	20.433	N. 17 32 29.1	42.44	23	6 28 16.66	21.024	N. 19 20 24.7	1.58
TUESDAY 6.					THURSDAY 8.				
	h m s	s	N. 17 36 41.4	41.66		h m s	s	N. 19 20 31.4	0.67
0	4 50 40.61	20.448			0	6 30 22.83	21.033		
1	4 52 43.34	20.463	17 40 49.0	40.88	1	6 32 29.05	21.040	19 20 32.7	0.23
2	4 54 46.17	20.479	17 44 51.9	40.08	2	6 34 35.31	21.048	19 20 28.6	1.14
3	4 56 49.09	20.494	17 48 50.0	39.29	3	6 36 41.62	21.055	19 20 19.0	2.04
4	4 58 52.10	20.509	17 52 43.4	38.49	4	6 38 47.97	21.062	19 20 4.1	2.94
5	5 0 55.20	20.525	17 56 31.9	37.68	5	6 40 54.36	21.068	19 19 43.7	3.86
6	5 2 58.40	20.540	18 0 15.6	36.88	6	6 43 0.79	21.075	19 19 17.8	4.77
7	5 5 1.68	20.554	18 3 54.5	36.08	7	6 45 7.26	21.083	19 18 46.5	5.67
8	5 7 5.05	20.569	18 7 28.5	35.27	8	6 47 13.78	21.089	19 18 9.8	6.58
9	5 9 8.51	20.584	18 10 57.7	34.45	9	6 49 20.33	21.094	19 17 27.6	7.48
10	5 11 12.06	20.599	18 14 21.9	33.63	10	6 51 26.91	21.101	19 16 40.0	8.39
11	5 13 15.70	20.613	18 17 41.2	32.81	11	6 53 33.54	21.107	19 15 46.9	9.30
12	5 15 19.42	20.628	18 20 55.6	31.99	12	6 55 40.19	21.112	19 14 48.4	10.21
13	5 17 23.23	20.642	18 24 5.1	31.16	13	6 57 46.88	21.118	19 13 44.4	11.12
14	5 19 27.12	20.655	18 27 9.5	30.33	14	6 59 53.60	21.123	19 12 35.0	12.03
15	5 21 31.09	20.669	18 30 9.0	29.49	15	7 2 0.36	21.128	19 11 20.0	12.95
16	5 23 35.15	20.683	18 33 3.4	28.65	16	7 4 7.14	21.133	19 9 59.6	13.85
17	5 25 39.29	20.698	18 35 52.8	27.82	17	7 6 13.95	21.138	19 8 33.8	14.76
18	5 27 43.52	20.711	18 38 37.2	26.98	18	7 8 20.79	21.143	19 7 2.5	15.68
19	5 29 47.82	20.723	18 41 16.6	26.13	19	7 10 27.66	21.147	19 5 25.7	16.59
20	5 31 52.20	20.737	18 43 50.8	25.28	20	7 12 34.55	21.151	19 3 43.4	17.50
21	5 33 56.66	20.750	18 46 20.0	24.43	21	7 14 41.47	21.155	19 1 55.7	18.41
22	5 36 1.20	20.763	18 48 44.0	23.58	22	7 16 48.41	21.158	19 0 2.5	19.32
23	5 38 5.81	20.775	18 51 2.9	22.73	23	7 18 55.37	21.162	18 58 3.9	20.23
24	5 40 10.50	20.788	N. 18 53 16.7	21.87	24	7 21 2.35	21.166	N. 18 55 59.8	21.14

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
FRIDAY 9.					SUNDAY 11.				
	h m s	s				h m s	s		
0	7 21 2.35	21.166	N.18° 55' 59.8	21.14	0	9 2 49.52	21.223	N.15° 31' 36.9	63.36
1	7 23 9.36	21.170	18 53 50.2	22.06	1	9 4 56.86	21.223	15 25 14.3	64.18
2	7 25 16.39	21.173	18 51 35.1	22.97	2	9 7 4.20	21.224	15 18 46.8	64.99
3	7 27 23.43	21.175	18 49 14.6	23.87	3	9 9 11.55	21.225	15 12 14.4	65.82
4	7 29 30.49	21.178	18 46 48.7	24.78	4	9 11 18.90	21.226	15 5 37.0	66.63
5	7 31 37.57	21.182	18 44 17.3	25.68	5	9 13 26.26	21.227	14 58 54.8	67.44
6	7 33 44.67	21.184	18 41 40.5	26.59	6	9 15 33.62	21.228	14 52 7.7	68.25
7	7 35 51.78	21.186	18 38 58.2	27.50	7	9 17 41.00	21.230	14 45 15.8	69.06
8	7 37 58.90	21.188	18 36 10.5	28.41	8	9 19 48.38	21.231	14 38 19.0	69.87
9	7 40 6.04	21.192	18 33 17.3	29.32	9	9 21 55.77	21.233	14 31 17.4	70.66
10	7 42 13.20	21.193	18 30 18.7	30.22	10	9 24 3.17	21.234	14 24 11.1	71.45
11	7 44 20.36	21.195	18 27 14.7	31.12	11	9 26 10.58	21.236	14 17 0.0	72.24
12	7 46 27.54	21.197	18 24 5.3	32.02	12	9 28 18.00	21.238	14 9 44.2	73.03
13	7 48 34.72	21.198	18 20 50.5	32.92	13	9 30 25.43	21.239	14 2 23.6	73.82
14	7 50 41.92	21.201	18 17 30.3	33.82	14	9 32 32.87	21.242	13 54 58.4	74.59
15	7 52 49.13	21.202	18 14 4.7	34.72	15	9 34 40.33	21.244	13 47 28.5	75.38
16	7 54 56.34	21.203	18 10 33.7	35.62	16	9 36 47.80	21.247	13 39 53.9	76.14
17	7 57 3.57	21.205	18 6 57.3	36.52	17	9 38 55.29	21.250	13 32 14.8	76.91
18	7 59 10.80	21.205	18 3 15.5	37.41	18	9 41 2.80	21.253	13 24 31.0	77.68
19	8 1 18.03	21.207	17 59 28.4	38.30	19	9 43 10.32	21.255	13 16 42.7	78.43
20	8 3 25.28	21.208	17 55 35.9	39.19	20	9 45 17.86	21.258	13 8 49.8	79.18
21	8 5 32.53	21.209	17 51 38.1	40.08	21	9 47 25.42	21.262	13 0 52.5	79.93
22	8 7 39.79	21.210	17 47 34.9	40.98	22	9 49 33.00	21.265	12 52 50.6	80.68
23	8 9 47.05	21.210	N.17° 43' 26.4	41.86	23	9 51 40.60	21.269	N.12° 44' 44.3	81.42
SATURDAY 10.					MONDAY 12.				
	h m s	s				h m s	s		
0	8 11 54.31	21.211	N.17° 39' 12.6	42.74	0	9 53 48.23	21.273	N.12° 36' 33.5	82.17
1	8 14 1.58	21.213	17 34 53.5	43.63	1	9 55 55.88	21.278	12 28 18.3	82.90
2	8 16 8.86	21.213	17 30 29.0	44.52	2	9 58 3.56	21.282	12 19 58.7	83.63
3	8 18 16.13	21.213	17 25 59.3	45.39	3	10 0 11.26	21.286	12 11 34.8	84.34
4	8 20 23.41	21.214	17 21 24.3	46.27	4	10 2 18.99	21.291	12 3 6.6	85.07
5	8 22 30.70	21.214	17 16 44.1	47.14	5	10 4 26.75	21.296	11 54 34.0	85.78
6	8 24 37.98	21.214	17 11 58.6	48.03	6	10 6 34.54	21.302	11 45 57.2	86.48
7	8 26 45.27	21.215	17 7 7.8	48.90	7	10 8 42.37	21.307	11 37 16.2	87.18
8	8 28 52.56	21.216	17 2 11.8	49.77	8	10 10 50.22	21.313	11 28 31.0	87.88
9	8 30 59.86	21.216	16 57 10.6	50.63	9	10 12 58.12	21.319	11 19 41.6	88.58
10	8 33 7.15	21.216	16 52 4.3	51.49	10	10 15 6.05	21.325	11 10 48.0	89.28
11	8 35 14.45	21.217	16 46 52.7	52.37	11	10 17 14.02	21.332	11 1 50.3	89.95
12	8 37 21.75	21.217	16 41 35.9	53.23	12	10 19 22.03	21.338	10 52 48.6	90.63
13	8 39 29.05	21.217	16 36 14.0	54.08	13	10 21 30.08	21.345	10 43 42.8	91.31
14	8 41 36.35	21.218	16 30 47.0	54.93	14	10 23 38.17	21.353	10 34 32.9	91.98
15	8 43 43.66	21.218	16 25 14.8	55.79	15	10 25 46.31	21.361	10 25 19.1	92.63
16	8 45 50.97	21.218	16 19 37.5	56.64	16	10 27 54.50	21.368	10 16 1.4	93.28
17	8 47 58.28	21.218	16 13 55.1	57.49	17	10 30 2.73	21.377	10 6 39.7	93.93
18	8 50 5.59	21.218	16 8 7.6	58.33	18	10 32 11.02	21.385	9 57 14.2	94.58
19	8 52 12.90	21.219	16 2 15.0	59.18	19	10 34 19.35	21.393	9 47 44.8	95.21
20	8 54 20.22	21.220	15 56 17.4	60.02	20	10 36 27.74	21.403	9 38 11.7	95.84
21	8 56 27.54	21.221	15 50 14.8	60.85	21	10 38 36.19	21.413	9 28 34.7	96.48
22	8 58 34.87	21.221	15 44 7.2	61.68	22	10 40 44.70	21.423	9 18 54.0	97.09
23	9 0 42.19	21.221	15 37 54.6	62.53	23	10 42 53.26	21.433	9 9 9.6	97.70
24	9 2 49.52	21.223	N.15° 31' 36.9	63.36	24	10 45 1.89	21.443	N. 8° 59' 21.6	98.31

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
TUESDAY 13.					THURSDAY 15.				
	h m s	s				h m s	s		
0	10 45 1·89	21·443	N. 8 59 21·6	98·31	0	12 29 52·10	22·397	N. 0 12 0·5	118·01
1	10 47 10·58	21·453	8 49 29·9	98·91	1	12 32 6·57	22·426	N. 0 0 11·9	118·18
2	10 49 19·33	21·464	8 39 34·7	99·50	2	12 34 21·21	22·456	S. 0 11 37·6	118·33
3	10 51 28·15	21·476	8 29 35·9	100·09	3	12 36 36·04	22·488	0 23 28·1	118·48
4	10 53 37·04	21·488	8 19 33·6	100·67	4	12 38 51·06	22·519	0 35 19·4	118·61
5	10 55 46·01	21·500	8 9 27·9	101·24	5	12 41 6·27	22·551	0 47 11·4	118·73
6	10 57 55·04	21·512	7 59 18·7	101·81	6	12 43 21·67	22·583	0 59 4·2	118·84
7	11 0 4·15	21·526	7 49 6·2	102·37	7	12 45 37·27	22·616	1 10 57·5	118·93
8	11 2 13·35	21·539	7 38 50·3	102·93	8	12 47 53·06	22·648	1 22 51·4	119·03
9	11 4 22·62	21·552	7 28 31·1	103·47	9	12 50 9·05	22·683	1 34 45·8	119·10
10	11 6 31·97	21·566	7 18 8·7	104·01	10	12 52 25·25	22·717	1 46 40·6	119·16
11	11 8 41·41	21·580	7 7 43·0	104·53	11	12 54 41·65	22·750	1 58 35·7	119·20
12	11 10 50·93	21·595	6 57 14·3	105·05	12	12 56 58·25	22·785	2 10 31·0	119·23
13	11 13 0·55	21·610	6 46 42·4	105·58	13	12 59 15·07	22·821	2 22 26·4	119·25
14	11 15 10·25	21·625	6 36 7·4	106·08	14	13 1 32·10	22·856	2 34 22·0	119·26
15	11 17 20·05	21·642	6 25 29·4	106·58	15	13 3 49·34	22·892	2 46 17·5	119·25
16	11 19 29·95	21·658	6 14 48·4	107·08	16	13 6 6·80	22·928	2 58 13·0	119·23
17	11 21 39·94	21·674	6 4 4·5	107·56	17	13 8 24·48	22·964	3 10 8·2	119·19
18	11 23 50·04	21·691	5 53 17·7	108·03	18	13 10 42·37	23·001	3 22 3·3	119·15
19	11 26 0·23	21·708	5 42 28·1	108·50	19	13 13 0·49	23·039	3 33 58·0	119·08
20	11 28 10·54	21·727	5 31 35·7	108·96	20	13 15 18·84	23·078	3 45 52·2	119·00
21	11 30 20·95	21·744	5 20 40·6	109·41	21	13 17 37·42	23·115	3 57 46·0	118·92
22	11 32 31·47	21·763	5 9 42·8	109·86	22	13 19 56·22	23·153	4 9 39·2	118·81
23	11 34 42·11	21·783	N. 4 58 42·3	110·29	23	13 22 15·25	23·192	S. 4 21 31·7	118·69
WEDNESDAY 14.					FRIDAY 16.				
0	11 36 52·86	21·802	N. 4 47 39·3	110·71	0	13 24 34·52	23·232	S. 4 33 23·5	118·56
1	11 39 3·73	21·822	4 36 33·8	111·13	1	13 26 54·03	23·271	4 45 14·4	118·41
2	11 41 14·72	21·842	4 25 25·7	111·54	2	13 29 13·77	23·310	4 57 4·4	118·25
3	11 43 25·83	21·863	4 14 15·3	111·93	3	13 31 33·75	23·351	5 8 53·4	118·08
4	11 45 37·07	21·883	4 3 2·5	112·33	4	13 33 53·98	23·391	5 20 41·3	117·88
5	11 47 48·43	21·905	3 51 47·4	112·71	5	13 36 14·44	23·431	5 32 28·0	117·67
6	11 49 59·93	21·928	3 40 30·0	113·08	6	13 38 35·15	23·473	5 44 13·3	117·44
7	11 52 11·56	21·949	3 29 10·4	113·44	7	13 40 56·11	23·514	5 55 57·3	117·22
8	11 54 23·32	21·972	3 17 48·7	113·79	8	13 43 17·32	23·555	6 7 39·9	116·97
9	11 56 35·22	21·996	3 6 24·9	114·13	9	13 45 38·77	23·597	6 19 20·9	116·69
10	11 58 47·27	22·020	2 54 59·1	114·46	10	13 48 0·48	23·639	6 31 0·2	116·41
11	12 0 59·46	22·043	2 43 31·4	114·78	11	13 50 22·44	23·682	6 42 37·8	116·11
12	12 3 11·79	22·068	2 32 1·7	115·10	12	13 52 44·66	23·724	6 54 13·5	115·79
13	12 5 24·27	22·093	2 20 30·2	115·40	13	13 55 7·13	23·767	7 5 47·3	115·47
14	12 7 36·90	22·118	2 8 56·9	115·69	14	13 57 29·86	23·809	7 17 19·1	115·13
15	12 9 49·69	22·144	1 57 21·9	115·97	15	13 59 52·84	23·853	7 28 48·8	114·77
16	12 12 2·63	22·170	1 45 45·3	116·23	16	14 2 16·09	23·896	7 40 16·3	114·38
17	12 14 15·73	22·197	1 34 7·1	116·50	17	14 4 39·59	23·939	7 51 41·4	113·99
18	12 16 28·99	22·224	1 22 27·3	116·75	18	14 7 3·36	23·983	8 3 4·2	113·58
19	12 18 42·42	22·252	1 10 46·1	116·98	19	14 9 27·39	24·027	8 14 24·4	113·16
20	12 20 56·01	22·279	0 59 3·5	117·21	20	14 11 51·68	24·071	8 25 42·1	112·72
21	12 23 9·77	22·308	0 47 19·6	117·43	21	14 14 16·24	24·115	8 36 57·0	112·26
22	12 25 23·71	22·337	0 35 34·4	117·63	22	14 16 41·06	24·159	8 48 9·2	111·79
23	12 27 37·81	22·366	0 23 48·0	117·82	23	14 19 6·15	24·203	8 59 18·5	111·30
24	12 29 52·10	22·397	N. 0 12 0·5	118·01	24	14 21 31·50	24·248	S. 9 10 24·8	110·79

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .		
SATURDAY 17.					MONDAY 19.						
	h m s	s	° ' "			h m s	s	° ' "			
0	14 21 31	50	24.248	S. 9 10 24.8	110.79	0	16 22 46	77	26.136	S. 16 33 31.2	68.03
1	14 23 57	12	24.293	9 21 28.0	110.27	1	16 25 23	67	26.163	16 40 15.7	66.80
2	14 26 23	01	24.337	9 32 28.0	109.73	2	16 28 0	72	26.188	16 46 52.8	65.56
3	14 28 49	16	24.381	9 43 24.7	109.18	3	16 30 37	93	26.213	16 53 22.4	64.31
4	14 31 15	58	24.426	9 54 18.1	108.61	4	16 33 15	28	26.237	16 59 44.5	63.04
5	14 33 42	27	24.470	10 5 8.0	108.02	5	16 35 52	77	26.260	17 5 58.9	61.77
6	14 36 9	22	24.514	10 15 54.3	107.42	6	16 38 30	40	26.282	17 12 5.7	60.48
7	14 38 36	44	24.559	10 26 37.0	106.80	7	16 41 8	15	26.303	17 18 4.7	59.19
8	14 41 3	93	24.604	10 37 15.9	106.16	8	16 43 46	03	26.323	17 23 56.0	57.89
9	14 43 31	69	24.648	10 47 50.9	105.51	9	16 46 24	03	26.343	17 29 39.4	56.58
10	14 45 59	71	24.693	10 58 22.0	104.84	10	16 49 2	14	26.360	17 35 14.9	55.26
11	14 48 28	00	24.737	11 8 49.0	104.15	11	16 51 40	35	26.377	17 40 42.5	53.93
12	14 50 56	55	24.781	11 19 11.8	103.44	12	16 54 18	66	26.393	17 46 2.0	52.58
13	14 53 25	37	24.825	11 29 30.3	102.73	13	16 56 57	07	26.409	17 51 13.5	51.24
14	14 55 54	45	24.869	11 39 44.5	102.00	14	16 59 35	57	26.423	17 56 16.9	49.89
15	14 58 23	80	24.913	11 49 54.3	101.25	15	17 2 14	15	26.436	18 1 12.2	48.53
16	15 0 53	40	24.956	11 59 59.5	100.48	16	17 4 52	80	26.448	18 5 59.3	47.17
17	15 3 23	27	25.000	12 10 0.1	99.70	17	17 7 31	52	26.458	18 10 38.2	45.79
18	15 5 53	40	25.043	12 19 55.9	98.90	18	17 10 10	30	26.468	18 15 8.8	44.41
19	15 8 23	78	25.085	12 29 46.9	98.09	19	17 12 49	14	26.478	18 19 31.1	43.03
20	15 10 54	42	25.128	12 39 33.0	97.26	20	17 15 28	03	26.485	18 23 45.2	41.64
21	15 13 25	32	25.171	12 49 14.0	96.41	21	17 18 6	96	26.492	18 27 50.8	40.24
22	15 15 56	47	25.213	12 58 49.9	95.55	22	17 20 45	93	26.497	18 31 48.1	38.84
23	15 18 27	87	25.254	S. 13 8 20.6	94.67	23	17 23 24	92	26.501	S. 18 35 36.9	37.43
SUNDAY 18.					TUESDAY 20.						
	h m s	s	° ' "			h m s	s	° ' "			
0	15 20 59	52	25.296	S. 13 17 45.9	93.78	0	17 26 3	94	26.504	S. 18 39 17.3	36.03
1	15 23 31	42	25.337	13 27 5.9	92.87	1	17 28 42	97	26.506	18 42 49.3	34.62
2	15 26 3	56	25.378	13 36 20.3	91.94	2	17 31 22	01	26.508	18 46 12.7	33.20
3	15 28 35	95	25.418	13 45 29.2	91.01	3	17 34 1	06	26.507	18 49 27.7	31.78
4	15 31 8	57	25.458	13 54 32.4	90.05	4	17 36 40	09	26.505	18 52 34.1	30.35
5	15 33 41	44	25.498	14 3 29.8	89.08	5	17 39 19	12	26.503	18 55 31.9	28.93
6	15 36 14	54	25.536	14 12 21.4	88.10	6	17 41 58	13	26.499	18 58 21.2	27.50
7	15 38 47	87	25.574	14 21 7.0	87.10	7	17 44 37	11	26.493	19 1 1.9	26.08
8	15 41 21	43	25.613	14 29 46.6	86.09	8	17 47 16	05	26.488	19 3 34.1	24.65
9	15 43 55	22	25.650	14 38 20.1	85.06	9	17 49 54	96	26.481	19 5 57.7	23.21
10	15 46 29	23	25.687	14 46 47.3	84.02	10	17 52 33	82	26.472	19 8 12.6	21.78
11	15 49 3	46	25.723	14 55 8.3	82.97	11	17 55 12	62	26.462	19 10 19.0	20.35
12	15 51 37	91	25.759	15 3 22.9	81.89	12	17 57 51	36	26.452	19 12 16.8	18.91
13	15 54 12	57	25.794	15 11 31.0	80.80	13	18 0 30	04	26.440	19 14 5.9	17.47
14	15 56 47	44	25.829	15 19 32.5	79.71	14	18 3 8	64	26.426	19 15 46.4	16.04
15	15 59 22	52	25.863	15 27 27.5	78.60	15	18 5 47	15	26.412	19 17 18.4	14.61
16	16 1 57	80	25.896	15 35 15.7	77.48	16	18 8 25	58	26.397	19 18 41.7	13.18
17	16 4 33	27	25.928	15 42 57.2	76.34	17	18 11 3	91	26.380	19 19 56.5	11.74
18	16 7 8	94	25.961	15 50 31.8	75.18	18	18 13 42	14	26.363	19 21 2.6	10.31
19	16 9 44	80	25.992	15 57 59.4	74.03	19	18 16 20	26	26.344	19 22 0.2	8.89
20	16 12 20	84	26.023	16 5 20.1	72.86	20	18 18 58	27	26.324	19 22 49.3	7.47
21	16 14 57	07	26.053	16 12 33.7	71.67	21	18 21 36	15	26.302	19 23 29.8	6.05
22	16 17 33	47	26.081	16 19 40.1	70.47	22	18 24 13	89	26.280	19 24 1.9	4.63
23	16 20 10	04	26.108	16 26 39.3	69.26	23	18 26 51	51	26.257	19 24 25.4	3.21
24	16 22 46	77	26.136	S. 16 33 31.2	68.03	24	18 29 28	98	26.233	S. 19 24 40.4	1.80

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
WEDNESDAY 21.					FRIDAY 23.				
	h m s	s				h m s	s		
0	18 29 28.08	26.233	S. 19 24 40.4	1.80	0	20 30 52.06	24.083	S. 17 3 21.9	57.19
1	18 32 6.30	26.207	19 24 47.0	0.39	1	20 33 16.39	24.026	16 57 35.8	58.17
2	18 34 43.46	26.180	19 24 45.1	1.02	2	20 35 40.37	23.968	16 51 43.9	59.13
3	18 37 20.46	26.153	19 24 34.8	2.42	3	20 38 4.01	23.911	16 45 46.2	60.09
4	18 39 57.30	26.125	19 24 16.1	3.81	4	20 40 27.30	23.853	16 39 42.8	61.03
5	18 42 33.06	26.094	19 23 49.1	5.19	5	20 42 50.24	23.794	16 33 33.8	61.97
6	18 45 10.43	26.063	19 23 13.8	6.58	6	20 45 12.83	23.737	16 27 19.2	62.89
7	18 47 46.72	26.033	19 22 30.1	7.97	7	20 47 35.08	23.679	16 20 59.1	63.80
8	18 50 22.82	26.004	19 21 38.2	9.33	8	20 49 56.98	23.620	16 14 33.6	64.69
9	18 52 58.72	25.966	19 20 38.1	10.69	9	20 52 18.52	23.562	16 8 2.8	65.58
10	18 55 34.41	25.931	19 19 29.9	12.06	10	20 54 39.72	23.504	16 1 26.7	66.44
11	18 58 9.89	25.895	19 18 13.4	13.42	11	20 57 0.57	23.446	15 54 45.5	67.30
12	19 0 45.15	25.858	19 16 48.9	14.76	12	20 59 21.07	23.388	15 47 59.1	68.16
13	19 3 20.19	25.822	19 15 16.3	16.11	13	21 1 41.22	23.329	15 41 7.6	69.00
14	19 5 55.01	25.783	19 13 35.6	17.44	14	21 4 1.02	23.271	15 34 11.1	69.83
15	19 8 29.59	25.744	19 11 47.0	18.76	15	21 6 20.47	23.213	15 27 9.7	70.63
16	19 11 3.94	25.704	19 9 50.5	20.08	16	21 8 39.57	23.155	15 20 3.5	71.43
17	19 13 38.04	25.663	19 7 46.0	21.39	17	21 10 58.33	23.097	15 12 52.5	72.23
18	19 16 11.89	25.621	19 5 33.8	22.69	18	21 13 16.73	23.038	15 5 36.8	73.00
19	19 18 45.49	25.578	19 3 13.7	23.99	19	21 15 34.79	22.982	14 58 16.5	73.77
20	19 21 18.83	25.535	19 0 45.9	25.28	20	21 17 52.51	22.923	14 50 51.6	74.53
21	19 23 51.91	25.491	18 58 10.4	26.55	21	21 20 9.87	22.866	14 43 22.2	75.28
22	19 26 24.72	25.446	18 55 27.3	27.82	22	21 22 26.90	22.809	14 35 48.3	76.01
23	19 28 57.26	25.401	S. 18 52 36.6	29.08	23	21 24 43.58	22.752	S. 14 28 10.1	76.72
THURSDAY 22.					SATURDAY 24.				
	h m s	s				h m s	s		
0	19 31 29.53	25.354	S. 18 49 38.4	30.33	0	21 26 59.92	22.695	S. 14 20 27.7	77.43
1	19 34 1.51	25.307	18 46 32.7	31.57	1	21 29 15.92	22.638	14 12 41.0	78.13
2	19 36 33.21	25.259	18 43 19.6	32.79	2	21 31 31.58	22.582	14 4 50.1	78.82
3	19 39 4.62	25.211	18 39 59.2	34.02	3	21 33 46.90	22.525	13 56 55.2	79.48
4	19 41 35.74	25.163	18 36 31.4	35.23	4	21 36 1.88	22.469	13 48 56.3	80.15
5	19 44 6.57	25.113	18 32 56.4	36.43	5	21 38 16.53	22.414	13 40 53.4	80.81
6	19 46 37.10	25.063	18 29 14.3	37.62	6	21 40 30.85	22.358	13 32 46.6	81.45
7	19 49 7.32	25.012	18 25 25.0	38.80	7	21 42 44.83	22.303	13 24 36.0	82.08
8	19 51 37.24	24.960	18 21 28.7	39.97	8	21 44 58.48	22.248	13 16 21.7	82.69
9	19 54 6.84	24.908	18 17 25.4	41.13	9	21 47 11.80	22.193	13 8 3.7	83.30
10	19 56 36.14	24.857	18 13 15.1	42.28	10	21 49 24.80	22.139	12 59 42.1	83.90
11	19 59 5.12	24.803	18 8 58.0	43.41	11	21 51 37.47	22.085	12 51 16.9	84.49
12	20 1 33.78	24.750	18 4 34.2	44.53	12	21 53 49.82	22.032	12 42 48.2	85.07
13	20 4 2.12	24.697	18 0 3.6	45.66	13	21 56 1.85	21.978	12 34 16.1	85.63
14	20 6 30.14	24.643	17 55 26.3	46.77	14	21 58 13.56	21.925	12 25 40.7	86.18
15	20 8 57.83	24.588	17 50 42.4	47.86	15	22 0 24.95	21.872	12 17 2.0	86.72
16	20 11 25.20	24.533	17 45 52.0	48.93	16	22 2 36.02	21.820	12 8 20.1	87.25
17	20 13 52.23	24.478	17 40 55.2	50.01	17	22 4 46.79	21.768	11 59 35.0	87.78
18	20 16 18.93	24.423	17 35 51.9	51.08	18	22 6 57.24	21.717	11 50 46.8	88.29
19	20 18 45.30	24.367	17 30 42.3	52.13	19	22 9 7.39	21.666	11 41 55.5	88.79
20	20 21 11.33	24.310	17 25 26.4	53.16	20	22 11 17.23	21.614	11 33 1.3	89.28
21	20 23 37.02	24.254	17 20 4.4	54.18	21	22 13 26.76	21.564	11 24 4.2	89.76
22	20 26 2.38	24.198	17 14 36.3	55.19	22	22 15 36.00	21.515	11 15 4.2	90.23
23	20 28 27.39	24.140	17 9 2.1	56.20	23	22 17 44.94	21.465	11 6 1.4	90.69
24	20 30 52.06	24.083	S. 17 3 21.9	57.19	24	22 19 53.58	21.417	S. 10 56 55.9	91.14

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10m.	Declination.	Var. in 10m.	Hour.	Right Ascension.	Var. in 10m.	Declination.	Var. in 10m.
SUNDAY 25.					TUESDAY 27.				
	h m s	s				h m s	s		
0	22 19 53.58	21.417	S. 10 56 55.9	91.14	0	23 57 58.42	19.653	S. 3 4 53.3	102.35
1	22 22 1.94	21.368	10 47 47.7	91.58	1	23 59 56.26	19.628	2 54 39.1	102.39
2	22 24 10.00	21.319	10 38 36.9	92.02	2	0 1 53.96	19.605	2 44 24.6	102.43
3	22 26 17.77	21.272	10 29 23.5	92.43	3	0 3 51.52	19.583	2 34 9.9	102.46
4	22 28 25.26	21.225	10 20 7.7	92.84	4	0 5 48.95	19.561	2 23 55.1	102.48
5	22 30 32.47	21.178	10 10 49.4	93.25	5	0 7 46.25	19.539	2 13 40.2	102.49
6	22 32 39.39	21.131	10 1 28.7	93.64	6	0 9 43.42	19.519	2 3 25.2	102.50
7	22 34 46.04	21.086	9 52 5.7	94.02	7	0 11 40.47	19.498	1 53 10.2	102.50
8	22 36 52.42	21.041	9 42 40.5	94.39	8	0 13 37.39	19.478	1 42 55.2	102.50
9	22 38 58.53	20.996	9 33 13.0	94.76	9	0 15 34.20	19.458	1 32 40.2	102.48
10	22 41 4.37	20.951	9 23 43.4	95.12	10	0 17 30.89	19.439	1 22 25.4	102.46
11	22 43 9.94	20.907	9 14 11.6	95.46	11	0 19 27.47	19.422	1 12 10.7	102.44
12	22 45 15.25	20.864	9 4 37.9	95.79	12	0 21 23.95	19.403	1 1 56.1	102.41
13	22 47 20.31	20.821	8 55 2.1	96.13	13	0 23 20.31	19.386	0 51 41.8	102.37
14	22 49 25.10	20.778	8 45 24.4	96.43	14	0 25 16.58	19.369	0 41 27.7	102.33
15	22 51 29.65	20.737	8 35 44.9	96.74	15	0 27 12.74	19.353	0 31 13.9	102.28
16	22 53 33.94	20.695	8 26 3.5	97.05	16	0 29 8.81	19.338	0 21 0.4	102.22
17	22 55 37.99	20.654	8 16 20.3	97.34	17	0 31 4.79	19.322	0 10 47.3	102.15
18	22 57 41.79	20.614	8 6 35.4	97.62	18	0 33 0.67	19.307	S. 0 0 34.6	102.08
19	22 59 45.36	20.574	7 56 48.9	97.89	19	0 34 56.47	19.293	N. 0 9 37.7	102.01
20	23 1 48.68	20.534	7 47 0.7	98.16	20	0 36 52.19	19.279	0 19 49.5	101.92
21	23 3 51.77	20.496	7 37 11.0	98.42	21	0 38 47.82	19.266	0 30 0.7	101.83
22	23 5 54.63	20.458	7 27 19.7	98.67	22	0 40 43.38	19.254	0 40 11.4	101.74
23	23 7 57.26	20.420	S. 7 17 27.0	98.91	23	0 42 38.87	19.242	N. 0 50 21.6	101.64
MONDAY 26.					WEDNESDAY 28.				
0	23 9 59.67	20.383	S. 7 7 32.8	99.14	0	0 44 34.28	19.229	N. 1 0 31.1	101.53
1	23 12 1.86	20.347	6 57 37.3	99.36	1	0 46 29.62	19.218	1 10 39.9	101.41
2	23 14 3.83	20.310	6 47 40.5	99.58	2	0 48 24.90	19.208	1 20 48.0	101.30
3	23 16 5.58	20.274	6 37 42.4	99.78	3	0 50 20.12	19.198	1 30 55.5	101.18
4	23 18 7.12	20.239	6 27 43.1	99.97	4	0 52 15.28	19.188	1 41 2.1	101.03
5	23 20 8.45	20.205	6 17 42.7	100.17	5	0 54 10.38	19.178	1 51 7.9	100.90
6	23 22 9.58	20.171	6 7 41.1	100.36	6	0 56 5.42	19.170	2 1 12.9	100.75
7	23 24 10.50	20.138	5 57 38.4	100.53	7	0 58 0.42	19.163	2 11 16.9	100.60
8	23 26 11.23	20.105	5 47 34.7	100.69	8	0 59 55.37	19.154	2 21 20.1	100.45
9	23 28 11.76	20.072	5 37 30.1	100.85	9	1 1 50.27	19.147	2 31 22.3	100.28
10	23 30 12.09	20.040	5 27 24.5	101.01	10	1 3 45.13	19.140	2 41 23.5	100.12
11	23 32 12.24	20.009	5 17 18.0	101.16	11	1 5 39.95	19.134	2 51 23.7	99.95
12	23 34 12.20	19.978	5 7 10.6	101.29	12	1 7 34.74	19.128	3 1 22.9	99.77
13	23 36 11.98	19.948	4 57 2.5	101.42	13	1 9 29.49	19.123	3 11 20.9	99.58
14	23 38 11.58	19.918	4 46 53.6	101.54	14	1 11 24.21	19.118	3 21 17.8	99.38
15	23 40 11.00	19.889	4 36 44.0	101.65	15	1 13 18.90	19.113	3 31 13.5	99.18
16	23 42 10.25	19.861	4 26 33.8	101.76	16	1 15 13.57	19.110	3 41 8.0	98.98
17	23 44 9.33	19.833	4 16 22.9	101.86	17	1 17 8.22	19.106	3 51 1.3	98.78
18	23 46 8.25	19.806	4 6 11.5	101.94	18	1 19 2.84	19.103	4 0 53.3	98.56
19	23 48 7.00	19.778	3 55 59.6	102.03	19	1 20 57.45	19.100	4 10 44.0	98.33
20	23 50 5.59	19.752	3 45 47.1	102.12	20	1 22 52.04	19.098	4 20 33.3	98.11
21	23 52 4.02	19.726	3 35 34.2	102.18	21	1 24 46.62	19.096	4 30 21.3	97.88
22	23 54 2.30	19.701	3 25 20.9	102.24	22	1 26 41.19	19.094	4 40 7.8	97.63
23	23 56 0.43	19.677	3 15 7.3	102.30	23	1 28 35.75	19.093	4 49 52.9	97.40
24	23 57 58.42	19.653	S. 3 4 53.3	102.35	24	1 30 30.31	19.093	N. 4 59 36.6	97.15

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
THURSDAY 29.					SATURDAY 31.				
	<i>h m s</i>	<i>s</i>	<i>N.</i>			<i>h m s</i>	<i>s</i>	<i>N.</i>	
0	1 30 30.31	19.093	4 59 36.6	97.15	0	3 2 49.07	19.497	12 6 19.4	78.51
1	1 32 24.87	19.093	5 9 18.7	96.88	1	3 4 46.10	19.512	12 14 8.9	77.98
2	1 34 19.43	19.093	5 18 59.2	96.63	2	3 6 43.21	19.527	12 21 55.2	77.45
3	1 36 13.99	19.094	5 28 38.2	96.36	3	3 8 40.42	19.543	12 29 38.3	76.92
4	1 38 8.56	19.096	5 38 15.5	96.08	4	3 10 37.72	19.558	12 37 18.2	76.38
5	1 40 3.14	19.097	5 47 51.2	95.81	5	3 12 35.12	19.575	12 44 54.8	75.83
6	1 41 57.72	19.098	5 57 25.2	95.53	6	3 14 32.62	19.591	12 52 28.2	75.28
7	1 43 52.32	19.102	6 6 57.5	95.23	7	3 16 30.21	19.608	12 59 58.2	74.72
8	1 45 46.94	19.104	6 16 28.0	94.93	8	3 18 27.91	19.624	13 7 24.8	74.16
9	1 47 41.57	19.108	6 25 56.7	94.63	9	3 20 25.70	19.641	13 14 48.1	73.60
10	1 49 36.23	19.112	6 35 23.6	94.33	10	3 22 23.60	19.658	13 22 8.0	73.03
11	1 51 30.91	19.115	6 44 48.6	94.02	11	3 24 21.60	19.675	13 29 24.4	72.44
12	1 53 25.61	19.119	6 54 11.8	93.70	12	3 26 19.70	19.692	13 36 37.3	71.86
13	1 55 20.34	19.124	7 3 33.0	93.37	13	3 28 17.91	19.710	13 43 46.7	71.28
14	1 57 15.10	19.129	7 12 52.2	93.04	14	3 30 16.22	19.728	13 50 52.6	70.68
15	1 59 9.89	19.135	7 22 9.5	92.71	15	3 32 14.64	19.745	13 57 54.9	70.08
16	2 1 4.72	19.141	7 31 24.7	92.37	16	3 34 13.16	19.763	14 4 53.6	69.48
17	2 2 59.58	19.147	7 40 37.9	92.03	17	3 36 11.79	19.781	14 11 48.7	68.87
18	2 4 54.48	19.154	7 49 49.0	91.67	18	3 38 10.53	19.799	14 18 40.0	68.25
19	2 6 49.43	19.161	7 58 57.9	91.31	19	3 40 9.38	19.818	14 25 27.7	67.64
20	2 8 44.41	19.168	8 8 4.7	90.94	20	3 42 8.34	19.835	14 32 11.7	67.01
21	2 10 39.44	19.176	8 17 9.2	90.58	21	3 44 7.40	19.853	14 38 51.8	66.38
22	2 12 34.52	19.183	8 26 11.6	90.21	22	3 46 6.58	19.873	14 45 28.2	65.75
23	2 14 29.64	19.192	8 35 11.7	89.83	23	3 48 5.87	19.890	14 52 0.8	65.11
FRIDAY 30.					SUNDAY, JUNE 1.				
	<i>h m s</i>	<i>s</i>	<i>N.</i>			<i>h m s</i>	<i>s</i>	<i>N.</i>	
0	2 16 24.82	19.201	8 44 9.5	89.43	0	3 50 5.26	19.908	14 58 29.5	64.46
1	2 18 20.05	19.209	8 53 4.9	89.04					
2	2 20 15.33	19.218	9 1 58.0	88.65					
3	2 22 10.67	19.228	9 10 48.7	88.24					
4	2 24 6.07	19.239	9 19 36.9	87.83					
5	2 26 1.54	19.249	9 28 22.7	87.42					
6	2 27 57.06	19.258	9 37 5.9	87.00					
7	2 29 52.64	19.270	9 45 46.7	86.58					
8	2 31 48.30	19.282	9 54 24.8	86.14					
9	2 33 44.02	19.293	10 3 0.4	85.71					
10	2 35 39.81	19.304	10 11 33.3	85.27					
11	2 37 35.67	19.317	10 20 3.6	84.83					
12	2 39 31.61	19.329	10 28 31.2	84.37					
13	2 41 27.62	19.341	10 36 56.0	83.91					
14	2 43 23.70	19.353	10 45 18.1	83.45					
15	2 45 19.86	19.368	10 53 37.4	82.98					
16	2 47 16.11	19.381	11 1 53.8	82.50					
17	2 49 12.43	19.393	11 10 7.4	82.03					
18	2 51 8.83	19.408	11 18 18.1	81.53					
19	2 53 5.32	19.423	11 26 25.8	81.04					
20	2 55 1.90	19.437	11 34 30.6	80.55					
21	2 56 58.56	19.451	11 42 32.4	80.04					
22	2 58 55.31	19.465	11 50 31.1	79.53					
23	3 0 52.14	19.480	11 58 26.8	79.03					
24	3 2 49.07	19.497	12 6 19.4	78.51					

PHASES OF THE MOON.

		<i>h m</i>
May 3	● New Moon	- - 11 0.0
11	☾ First Quarter	- 14 13.7
18	○ Full Moon	- - 9 52.5
25	☾ Last Quarter	- - 2 16.3
<hr/>		
		<i>h</i>
May 5	☾ Apogee	- - - 14.0
18	☾ Perigee	- - - 17.3

AT APPARENT NOON.

THE SUN'S					Sidereal Time of the Semi- diameter passing the Meridian.*	Equation of Time, to be subtracted from		Var. in 1 hour.
Date.	Apparent Right Ascension.		Var. in 1 hour.	Apparent Declination.		Var. in 1 hour.	added to Apparent Time.	
		h m s	s	N. ° ' "	"	m s	m s	s
Sun.	1	4 36 22.67	10.235	N. 22 3 20.3	20.41	1 8.35	2 22.86	0.378
Mon.	2	4 40 28.52	10.252	22 11 18.6	19.45	1 8.41	2 13.59	0.394
Tues.	3	4 44 34.76	10.267	22 18 53.7	18.48	1 8.46	2 3.93	0.410
Wed.	4	4 48 41.36	10.282	22 26 5.5	17.50	1 8.51	1 53.91	0.425
Thur.	5	4 52 48.31	10.296	22 32 53.7	16.51	1 8.56	1 43.55	0.438
Frid.	6	4 56 55.57	10.309	22 39 18.2	15.52	1 8.60	1 32.87	0.451
Sat.	7	5 1 3.14	10.321	22 45 18.9	14.53	1 8.65	1 21.89	0.463
Sun.	8	5 5 10.98	10.332	22 50 55.6	13.53	1 8.69	1 10.64	0.474
Mon.	9	5 9 19.08	10.342	22 56 8.2	12.52	1 8.72	0 59.13	0.484
Tues.	10	5 13 27.41	10.351	23 0 56.6	11.51	1 8.76	0 47.39	0.494
Wed.	11	5 17 35.94	10.359	23 5 20.7	10.49	1 8.79	0 35.44	0.502
Thur.	12	5 21 44.66	10.367	23 9 20.3	9.47	1 8.82	0 23.31	0.509
Frid.	13	5 25 53.55	10.373	23 12 55.5	8.45	1 8.84	0 11.01	0.515
Sat.	14	5 30 2.58	10.379	23 16 6.1	7.43	1 8.86	0 1.43	0.521
Sun.	15	5 34 11.74	10.384	23 18 52.0	6.40	1 8.88	0 13.99	0.526
Mon.	16	5 38 21.01	10.388	23 21 13.2	5.37	1 8.89	0 26.67	0.530
Tues.	17	5 42 30.36	10.391	23 23 9.8	4.34	1 8.90	0 39.43	0.533
Wed.	18	5 46 39.79	10.394	23 24 41.6	3.31	1 8.91	0 52.27	0.536
Thur.	19	5 50 49.27	10.396	23 25 48.6	2.27	1 8.92	1 5.16	0.538
Frid.	20	5 54 58.79	10.397	23 26 30.7	1.24	1 8.92	1 18.08	0.539
Sat.	21	5 59 8.33	10.397	23 26 48.1	0.21	1 8.92	1 31.02	0.539
Sun.	22	6 3 17.86	10.396	23 26 40.8	0.82	1 8.91	1 43.96	0.539
Mon.	23	6 7 27.36	10.395	23 26 8.6	1.86	1 8.90	1 56.87	0.537
Tues.	24	6 11 36.81	10.392	23 25 11.6	2.89	1 8.89	2 9.73	0.534
Wed.	25	6 15 46.19	10.389	23 23 50.0	3.92	1 8.88	2 22.52	0.531
Thur.	26	6 19 55.47	10.384	23 22 3.6	4.95	1 8.86	2 35.20	0.526
Frid.	27	6 24 4.62	10.378	23 19 52.6	5.97	1 8.84	2 47.76	0.520
Sat.	28	6 28 13.62	10.371	23 17 17.0	6.99	1 8.81	3 0.17	0.514
Sun.	29	6 32 22.44	10.364	23 14 16.9	8.01	1 8.78	3 12.41	0.506
Mon.	30	6 36 31.07	10.355	23 10 52.4	9.03	1 8.75	3 24.45	0.497
Tues.	31	6 40 39.47	10.345	N. 23 7 3.5	10.04	1 8.72	3 36.26	0.487

* Mean Time of the Semidiameter passing may be found by subtracting 0^s.19 from the Sidereal Time.

AT MEAN NOON.

		THE SUN'S			Equation of Time, to be subtracted from	Sidereal Time.
		Apparent Right Ascension.	Apparent Declination.	Semi- diameter.*	added to Apparent Time.	
Date.		h m s	N. ° ' "	' "	m s	h m s
Sun.	1	4 36 23.07	N. 22 3 21.1	15 47.59	2 22.84	4 38 45.92
Mon.	2	4 40 28.90	22 11 19.3	15 47.45	2 13.57	4 42 42.47
Tues.	3	4 44 35.11	22 18 54.3	15 47.32	2 3.92	4 46 39.03
Wed.	4	4 48 41.68	22 26 6.0	15 47.19	1 53.90	4 50 35.59
Thur.	5	4 52 48.60	22 32 54.2	15 47.07	1 43.54	4 54 32.14
Frid.	6	4 56 55.84	22 39 18.6	15 46.95	1 32.86	4 58 28.70
Sat.	7	5 1 3.38	22 45 19.2	15 46.84	1 21.88	5 2 25.26
Sun.	8	5 5 11.19	22 50 55.8	15 46.74	1 10.63	5 6 21.81
Mon.	9	5 9 19.25	22 56 8.4	15 46.63	0 59.12	5 10 18.37
Tues.	10	5 13 27.54	23 0 56.8	15 46.54	0 47.38	5 14 14.93
Wed.	11	5 17 36.04	23 5 20.8	15 46.44	0 35.44	5 18 11.48
Thur.	12	5 21 44.73	23 9 20.4	15 46.35	0 23.31	5 22 8.04
Frid.	13	5 25 53.58	23 12 55.5	15 46.26	0 11.01	5 26 4.60
Sat.	14	5 30 2.58	23 16 6.1	15 46.18	0 1.43	5 30 1.15
Sun.	15	5 34 11.70	23 18 52.0	15 46.10	0 13.99	5 33 57.71
Mon.	16	5 38 20.93	23 21 13.2	15 46.02	0 26.66	5 37 54.27
Tues.	17	5 42 30.25	23 23 9.7	15 45.95	0 39.42	5 41 50.82
Wed.	18	5 46 39.64	23 24 41.5	15 45.88	0 52.26	5 45 47.38
Thur.	19	5 50 49.09	23 25 48.5	15 45.81	1 5.15	5 49 43.94
Frid.	20	5 54 58.57	23 26 30.7	15 45.74	1 18.07	5 53 40.50
Sat.	21	5 59 8.06	23 26 48.1	15 45.68	1 31.01	5 57 37.05
Sun.	22	6 3 17.56	23 26 40.8	15 45.62	1 43.95	6 1 33.61
Mon.	23	6 7 27.02	23 26 8.6	15 45.57	1 56.86	6 5 30.17
Tues.	24	6 11 36.44	23 25 11.7	15 45.52	2 9.71	6 9 26.72
Wed.	25	6 15 45.78	23 23 50.1	15 45.47	2 22.50	6 13 23.28
Thur.	26	6 19 55.02	23 22 3.8	15 45.43	2 35.18	6 17 19.84
Frid.	27	6 24 4.13	23 19 52.9	15 45.40	2 47.74	6 21 16.39
Sat.	28	6 28 13.10	23 17 17.4	15 45.36	3 0.15	6 25 12.95
Sun.	29	6 32 21.89	23 14 17.4	15 45.34	3 12.38	6 29 9.51
Mon.	30	6 36 30.48	23 10 52.9	15 45.32	3 24.42	6 33 6.06
Tues.	31	6 40 38.85	N. 23 7 4.2	15 45.30	3 36.23	6 37 2.62

* The Semidiameter for *Apparent* Noon may be assumed the same as that for *Mean* Noon.

MEAN TIME.

Day.	THE SUN'S <i>Apparent</i>		Logarithm of the Radius Vector of the Earth.	Transit of the First Point of Aries.	THE MOON'S			
	Longitude.	Latitude.			Semidiameter.		Horizontal Parallax.	
	Noon.	Noon.			Noon.	Midnight.	Noon.	Midnight.
				h m s				
1	70° 41' 21.7	S. 0.38	0.0061842	19 18 3.84	14 41.93	14 41.57	53 56.80	53 55.49
2	71 38 50.9	0.37	.0062472	19 14 7.93	14 41.59	14 41.98	53 55.56	53 56.98
3	72 36 19.2	0.33	.0063079	19 10 12.02	14 42.73	14 43.86	53 59.76	54 3.90
4	73 33 46.5	0.26	0.0063662	19 6 16.11	14 45.37	14 47.27	54 9.44	54 16.41
5	74 31 12.8	0.18	.0064223	19 2 20.20	14 49.58	14 52.30	54 24.87	54 34.87
6	75 28 38.0	S. 0.08	.0064759	18 58 24.29	14 55.46	14 59.08	54 46.48	54 59.75
7	76 26 2.2	N. 0.03	0.0065274	18 54 28.38	15 3.15	15 7.70	55 14.71	55 31.40
8	77 23 25.4	0.15	.0065766	18 50 32.47	15 12.72	15 18.21	55 49.83	56 9.95
9	78 20 47.5	0.27	.0066237	18 46 36.56	15 24.14	15 30.47	56 31.71	56 54.97
10	79 18 8.5	0.39	0.0066688	18 42 40.65	15 37.17	15 44.17	57 19.56	57 45.22
11	80 15 28.5	0.50	.0067120	18 38 44.74	15 51.36	15 58.65	58 11.64	58 38.39
12	81 12 47.5	0.58	.0067534	18 34 48.82	16 5.91	16 12.97	59 5.01	59 30.94
13	82 10 5.5	0.64	0.0067931	18 30 52.91	16 19.68	16 25.85	59 55.55	60 18.21
14	83 7 22.7	0.67	.0068313	18 26 57.00	16 31.30	16 35.86	60 38.23	60 54.95
15	84 4 39.0	0.66	.0068681	18 23 1.09	16 39.36	16 41.67	61 7.80	61 16.27
16	85 1 54.5	0.61	0.0069035	18 19 5.18	16 42.69	16 42.36	61 20.01	61 18.82
17	85 59 9.5	0.54	.0069376	18 15 9.27	16 40.69	16 37.72	61 12.69	61 1.79
18	86 56 23.9	0.46	.0069705	18 11 13.36	16 33.55	16 28.31	60 46.47	60 27.23
19	87 53 38.0	0.35	0.0070020	18 7 17.45	16 22.16	16 15.29	60 4.67	59 39.45
20	88 50 51.7	0.22	.0070321	18 3 21.53	16 7.89	16 0.16	59 12.31	58 43.93
21	89 48 5.3	N. 0.08	.0070606	17 59 25.62	15 52.28	15 44.41	58 14.99	57 46.11
22	90 45 18.7	S. 0.06	0.0070874	17 55 29.71	15 36.70	15 29.28	57 17.82	56 50.60
23	91 42 32.0	0.19	.0071124	17 51 33.80	15 22.26	15 15.71	56 24.81	56 0.77
24	92 39 45.3	0.31	.0071355	17 47 37.89	15 9.69	15 4.26	55 38.71	55 18.78
25	93 36 58.5	0.40	0.0071564	17 43 41.98	14 59.44	14 55.25	55 1.09	54 45.68
26	94 34 11.7	0.47	.0071752	17 39 46.07	14 51.67	14 48.72	54 32.57	54 21.73
27	95 31 24.9	0.52	.0071917	17 35 50.16	14 46.37	14 44.59	54 13.09	54 6.59
28	96 28 38.1	0.54	0.0072058	17 31 54.25	14 43.37	14 42.68	54 2.11	53 59.55
29	97 25 51.3	0.53	.0072174	17 27 58.34	14 42.47	14 42.73	53 58.80	53 59.74
30	98 23 4.5	0.50	.0072266	17 24 2.42	14 43.41	14 44.49	54 2.24	54 6.19
31	99 20 17.6	S. 0.44	0.0072332	17 20 6.51	14 45.93	14 47.73	54 11.51	54 18.09

MEAN TIME.

THE MOON'S							
Day.	Longitude.		Latitude.		Age.	Meridian Passage.	
	Noon.	Midnight.	Noon.	Midnight.	Noon.	Upper.	Lower.
	^h ^m ^s	^h ^m ^s	[°] ['] ["]	[°] ['] ["]	d	^h ^m	^h ^m
1	58 37 8.9	64 33 6.0	S. 5 0 10.6	S. 4 57 14.8	28.54	23 55.6	11 32.5
2	70 28 55.1	76 24 46.8	4 51 5.5	4 41 46.1	29.54	* *	12 18.9
3	82 20 52.0	88 17 22.0	4 29 22.1	4 14 0.1	0.89	0 42.5	13 6.3
4	94 14 20.2	100 12 27.7	3 55 48.8	3 34 57.8	1.89	1 30.3	13 54.4
5	106 11 33.5	112 12 4.5	3 11 38.6	2 46 3.8	2.89	2 18.6	14 42.8
6	118 14 21.2	124 18 46.5	2 18 27.2	1 49 4.3	3.89	3 7.0	15 31.2
7	130 25 45.4	136 35 45.3	1 18 11.4	S. 0 46 6.3	4.89	3 55.2	16 19.2
8	142 49 15.9	149 6 47.5	S. 0 13 8.2	N. 0 20 22.2	5.89	4 43.1	17 7.0
9	155 28 51.9	161 56 0.4	N. 0 54 2.6	1 27 29.1	6.89	5 30.8	17 54.7
10	168 28 43.2	175 7 28.2	2 0 15.8	2 31 55.3	7.89	6 18.8	18 43.1
11	181 52 39.2	188 44 34.4	3 1 58.1	3 29 53.5	8.89	7 7.7	19 32.7
12	195 43 24.8	202 49 11.6	3 55 9.6	4 17 14.2	9.89	7 58.3	20 24.5
13	210 1 45.6	217 20 45.0	4 35 35.7	4 49 44.4	10.89	8 51.4	21 19.1
14	224 45 35.0	232 15 27.4	4 59 14.1	5 3 43.8	11.89	9 47.6	22 16.9
15	239 49 21.8	247 26 6.9	5 2 58.6	4 56 52.4	12.89	10 47.0	23 17.8
16	255 4 23.6	262 42 48.2	4 45 27.5	4 28 55.9	13.89	11 49.0	* *
17	270 19 56.5	277 54 27.6	4 7 38.7	3 42 4.9	14.89	12 51.9	0 20.4
18	285 25 7.5	292 50 51.7	3 12 50.2	2 40 34.8	15.89	13 53.6	1 23.0
19	300 10 48.1	307 24 17.2	2 6 1.3	1 29 52.9	16.89	14 52.6	2 23.5
20	314 30 52.5	321 30 20.1	N. 0 52 51.7	N. 0 15 36.8	17.89	15 47.7	3 20.6
21	328 22 37.7	335 7 52.8	S. 0 21 15.8	S. 0 57 14.3	18.89	16 39.0	4 13.8
22	341 46 21.2	348 18 25.2	1 31 50.9	2 4 42.2	19.89	17 27.1	5 3.4
23	354 44 32.2	1 5 12.9	2 35 28.2	3 3 52.4	20.89	18 12.7	5 50.1
24	7 21 0.4	13 32 28.5	3 29 41.2	3 52 43.4	21.89	18 56.7	6 34.8
25	19 40 11.8	25 44 43.8	4 12 50.3	4 29 54.3	22.89	19 40.1	7 18.5
26	31 46 37.1	37 46 22.4	4 43 50.2	4 54 33.2	23.89	20 23.6	8 1.8
27	43 44 28.8	49 41 23.0	5 2 0.3	5 6 9.6	24.89	21 7.8	8 45.6
28	55 37 29.6	61 33 10.5	5 7 0.4	5 4 32.7	25.89	21 53.1	9 30.3
29	67 28 45.7	73 24 33.3	4 58 48.2	4 49 50.2	26.89	22 39.6	10 16.1
30	79 20 49.1	85 17 47.3	4 37 43.0	4 22 32.6	27.89	23 27.2	11 3.3
31	91 15 41.0	97 14 42.3	S. 4 4 26.8	S. 3 43 34.9	28.89	* *	11 51.4

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
SUNDAY 1.					TUESDAY 3.				
	h m s	s	N. 14° 58' 29.5"	64.46		h m s	s	N. 18° 44' 36.6"	28.13
0	3 50 5.26	19.908	15 4 54.3	63.81	0	5 27 45.94	20.758	18 47 22.8	27.28
1	3 52 4.77	19.928	15 11 15.2	63.16	1	5 29 50.53	20.773	18 50 3.9	26.43
2	3 54 4.39	19.946	15 23 45.1	61.83	2	5 31 55.21	20.787	18 55 10.7	24.71
3	3 56 4.12	19.965	15 29 54.1	61.16	3	5 33 59.97	20.801	18 57 36.4	23.84
4	3 58 3.97	19.984	15 35 59.0	60.48	4	5 36 4.82	20.815	19 2 12.1	22.12
5	4 0 3.93	20.003	15 47 56.6	59.12	5	5 38 9.75	20.828	19 4 22.2	21.24
6	4 2 4.00	20.021	15 53 49.3	58.43	6	5 40 14.76	20.842	19 6 27.0	20.36
7	4 4 4.18	20.039	16 5 22.0	57.73	7	5 42 19.85	20.855	19 8 26.5	19.48
8	4 6 4.47	20.058	16 11 2.1	56.33	8	5 44 25.02	20.868	19 10 20.8	18.62
9	4 8 4.88	20.078	16 16 38.0	55.63	9	5 46 30.27	20.881	19 12 9.9	17.73
10	4 10 5.41	20.097	16 22 9.6	54.90	10	5 48 35.59	20.893	19 13 53.6	16.84
11	4 12 6.04	20.115	16 27 36.8	54.18	11	5 50 40.99	20.906	19 15 32.0	15.96
12	4 14 6.79	20.134	16 32 59.8	53.47	12	5 52 46.46	20.917	19 17 5.1	15.08
13	4 16 7.65	20.153	16 38 18.4	52.73	13	5 54 51.99	20.928	19 18 32.9	14.19
14	4 18 8.62	20.172	16 43 32.6	52.00	14	5 56 57.60	20.941	19 19 55.4	13.30
15	4 20 9.71	20.191	16 48 42.4	51.27	15	5 59 3.28	20.952	19 21 12.5	12.40
16	4 22 10.91	20.209	16 53 47.8	50.53	16	6 1 3.92	20.962	19 22 24.2	11.51
17	4 24 12.22	20.228	17 3 45.1	49.78	17	6 3 14.82	20.973	19 23 30.6	10.61
18	4 26 13.65	20.247	17 8 37.0	48.28	18	6 5 20.69	20.983	19 24 31.5	9.71
19	4 28 15.18	20.265			19	6 7 26.62	20.993	19 25 27.1	8.81
20	4 30 16.83	20.284			20	6 9 32.61	21.003		
21	4 32 18.59	20.303			21	6 11 38.66	21.013		
22	4 34 20.46	20.321			22	6 13 44.77	21.023		
23	4 36 22.44	20.339			23	6 15 50.93	21.031		
MONDAY 2.					WEDNESDAY 4.				
	h m s	s	N. 17° 13' 24.4"	47.53		h m s	s	N. 19° 27' 2.0"	7.01
0	4 38 24.53	20.358	17 18 7.3	46.76	0	6 17 57.14	21.039	19 27 41.3	6.10
1	4 40 26.73	20.376	17 22 45.5	45.98	1	6 20 3.40	21.048	19 28 15.2	5.20
2	4 42 29.04	20.394	17 27 19.1	45.22	2	6 22 9.72	21.057	19 28 43.7	4.29
3	4 44 31.46	20.413	17 31 48.1	44.44	3	6 24 16.08	21.064	19 29 6.7	3.38
4	4 46 33.99	20.430	17 36 12.4	43.66	4	6 26 22.49	21.072	19 29 24.2	2.47
5	4 48 36.62	20.448	17 40 32.0	42.88	5	6 28 28.94	21.079	19 29 36.3	1.57
6	4 50 39.36	20.466	17 44 46.9	42.08	6	6 30 35.44	21.086	19 29 43.0	0.65
7	4 52 42.21	20.483	17 48 57.0	41.29	7	6 32 41.97	21.093	19 29 44.1	0.27
8	4 54 45.16	20.500	17 53 2.4	40.50	8	6 34 48.55	21.100	19 29 39.8	1.18
9	4 56 48.21	20.518	17 57 3.0	39.70	9	6 36 55.17	21.106	19 29 30.0	2.09
10	4 58 51.37	20.536	18 0 58.8	38.90	10	6 39 1.82	21.112	19 28 53.9	3.93
11	5 0 54.64	20.553	18 4 49.8	38.09	11	6 41 8.51	21.118	19 28 27.6	4.83
12	5 2 58.00	20.569	18 8 35.9	37.28	12	6 43 15.23	21.123	19 27 55.9	5.75
13	5 5 1.47	20.586	18 12 17.1	36.47	13	6 45 21.98	21.128	19 27 18.6	6.68
14	5 7 5.03	20.602	18 15 53.5	35.65	14	6 47 28.76	21.133	19 26 35.8	7.59
15	5 9 8.69	20.618	18 19 24.9	34.83	15	6 49 35.57	21.137	19 25 47.5	8.50
16	5 11 12.45	20.635	18 22 51.4	34.00	16	6 51 42.40	21.141	19 24 53.8	9.42
17	5 13 16.31	20.651	18 26 12.9	33.17	17	6 53 49.26	21.145	19 23 54.5	10.34
18	5 15 20.26	20.667	18 29 29.4	32.33	18	6 55 56.14	21.149	19 22 49.7	11.26
19	5 17 24.31	20.683	18 32 40.9	31.50	19	6 58 3.05	21.153	19 21 39.4	12.18
20	5 19 28.46	20.698	18 35 47.4	30.67	20	7 0 9.97	21.155	19 20 23.6	13.09
21	5 21 32.69	20.713	18 41 45.3	28.83	21	7 2 16.91	21.158	19 19 2.3	14.01
22	5 23 37.02	20.728			22	7 4 23.87	21.161		
23	5 25 41.43	20.743			23	7 6 30.84	21.163		
24	5 27 45.94	20.758			24	7 8 37.83	21.166		

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
THURSDAY 5.					SATURDAY 7.				
	h m s	s	N. 19 17 35.5	"		h m s	s	N. 16 22 33.6	"
0	7 8 37.83	21.166	19 17 35.5	14.93	0	8 50 3.08	21.033	16 22 33.6	57.23
1	7 10 44.83	21.168	19 16 3.2	15.84	1	8 52 9.26	21.028	16 16 47.8	58.05
2	7 12 51.84	21.169	19 14 25.4	16.76	2	8 54 15.41	21.022	16 10 57.0	58.88
3	7 14 58.86	21.170	19 12 42.1	17.68	3	8 56 21.52	21.016	16 5 1.3	59.69
4	7 17 5.88	21.171	19 10 53.3	18.59	4	8 58 27.60	21.010	15 59 0.7	60.50
5	7 19 12.91	21.172	19 8 59.0	19.51	5	9 0 33.64	21.005	15 52 55.3	61.30
6	7 21 19.94	21.173	19 6 59.2	20.42	6	9 2 39.66	21.000	15 46 45.1	62.11
7	7 23 26.98	21.173	19 4 54.0	21.33	7	9 4 45.64	20.994	15 40 30.0	62.91
8	7 25 34.02	21.173	19 2 43.3	22.24	8	9 6 51.59	20.989	15 34 10.2	63.69
9	7 27 41.06	21.173	19 0 27.1	23.15	9	9 8 57.51	20.983	15 27 45.7	64.48
10	7 29 48.09	21.172	18 58 5.5	24.06	10	9 11 3.39	20.978	15 21 16.4	65.28
11	7 31 55.12	21.172	18 55 38.4	24.98	11	9 13 9.25	20.974	15 14 42.3	66.07
12	7 34 2.15	21.172	18 53 5.8	25.88	12	9 15 15.08	20.968	15 8 3.6	66.83
13	7 36 9.18	21.170	18 50 27.8	26.78	13	9 17 20.87	20.963	15 1 20.3	67.61
14	7 38 16.19	21.168	18 47 44.4	27.68	14	9 19 26.63	20.958	14 54 32.3	68.38
15	7 40 23.20	21.167	18 44 55.6	28.59	15	9 21 32.37	20.954	14 47 39.7	69.16
16	7 42 30.19	21.165	18 42 1.3	29.50	16	9 23 38.08	20.948	14 40 42.4	69.93
17	7 44 37.18	21.163	18 39 1.6	30.40	17	9 25 43.75	20.943	14 33 40.6	70.68
18	7 46 44.15	21.161	18 35 56.5	31.29	18	9 27 49.40	20.940	14 26 34.3	71.43
19	7 48 51.11	21.159	18 32 46.1	32.19	19	9 29 55.03	20.936	14 19 23.5	72.18
20	7 50 58.06	21.157	18 29 30.2	33.09	20	9 32 0.63	20.931	14 12 8.2	72.93
21	7 53 4.99	21.154	18 26 9.0	33.98	21	9 34 6.20	20.926	14 4 48.4	73.67
22	7 55 11.91	21.151	18 22 42.4	34.88	22	9 36 11.74	20.923	13 57 24.2	74.40
23	7 57 18.80	21.148	N. 18 19 10.5	35.77	23	9 38 17.27	20.919	N. 13 49 55.6	75.13
FRIDAY 6.					SUNDAY 8.				
	h m s	s	N. 18 15 33.2	"		h m s	s	N. 13 42 22.6	"
0	7 59 25.68	21.145	N. 18 15 33.2	36.66	0	9 40 22.77	20.914	N. 13 42 22.6	75.86
1	8 1 32.54	21.142	18 11 50.6	37.54	1	9 42 28.24	20.911	13 34 45.3	76.56
2	8 3 39.38	21.138	18 8 2.7	38.43	2	9 44 33.70	20.908	13 27 3.6	77.31
3	8 5 46.19	21.134	18 4 9.5	39.31	3	9 46 39.13	20.904	13 19 17.6	78.02
4	8 7 52.99	21.131	18 0 11.0	40.19	4	9 48 44.55	20.902	13 11 27.4	78.73
5	8 9 59.76	21.126	17 56 7.2	41.08	5	9 50 49.95	20.898	13 3 32.9	79.43
6	8 12 6.50	21.122	17 51 58.1	41.95	6	9 52 55.33	20.895	12 55 34.2	80.13
7	8 14 13.22	21.118	17 47 43.8	42.82	7	9 55 0.69	20.893	12 47 31.3	80.83
8	8 16 19.92	21.114	17 43 24.3	43.68	8	9 57 6.04	20.891	12 39 24.3	81.51
9	8 18 26.59	21.109	17 38 59.6	44.56	9	9 59 11.38	20.889	12 31 13.2	82.20
10	8 20 33.23	21.105	17 34 29.6	45.43	10	10 1 16.71	20.887	12 22 57.9	82.88
11	8 22 39.85	21.100	17 29 54.5	46.28	11	10 3 22.02	20.885	12 14 38.6	83.55
12	8 24 46.43	21.095	17 25 14.2	47.15	12	10 5 27.33	20.884	12 6 15.3	84.23
13	8 26 52.99	21.091	17 20 28.7	48.01	13	10 7 32.63	20.883	11 57 47.9	84.89
14	8 28 59.52	21.085	17 15 38.1	48.86	14	10 9 37.92	20.882	11 49 16.6	85.54
15	8 31 6.01	21.080	17 10 42.4	49.71	15	10 11 43.21	20.881	11 40 41.4	86.20
16	8 33 12.48	21.076	17 5 41.6	50.56	16	10 13 48.49	20.881	11 32 2.2	86.86
17	8 35 18.92	21.070	17 0 35.7	51.40	17	10 15 53.78	20.881	11 23 19.1	87.50
18	8 37 25.32	21.065	16 55 24.8	52.24	18	10 17 59.06	20.881	11 14 32.2	88.13
19	8 39 31.70	21.060	16 50 8.8	53.09	19	10 20 4.35	20.882	11 5 41.5	88.77
20	8 41 38.04	21.054	16 44 47.7	53.93	20	10 22 9.64	20.882	10 56 47.0	89.39
21	8 43 44.35	21.049	16 39 21.6	54.76	21	10 24 14.93	20.883	10 47 48.8	90.02
22	8 45 50.63	21.043	16 33 50.6	55.58	22	10 26 20.23	20.884	10 38 46.8	90.63
23	8 47 56.87	21.038	16 28 14.6	56.42	23	10 28 25.54	20.886	10 29 41.2	91.24
24	8 50 3.08	21.033	N. 16 22 33.6	57.23	24	10 30 30.86	20.888	N. 10 20 31.9	91.84

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
MONDAY 9.					WEDNESDAY 11.				
	h m s	s	N. 10 20 31.9	91.84		h m s	s	N. 2 2 8.2	113.05
0	10 30 30.86	20.888	10 11 19.1	92.44	0	12 11 42.99	21.448	1 50 49.1	113.30
1	10 32 36.19	20.890	10 2 2.6	93.04	1	12 13 51.74	21.471	1 39 28.6	113.54
2	10 34 41.54	20.893	9 52 42.6	93.63	2	12 16 0.64	21.495	1 28 6.6	113.78
3	10 36 46.90	20.895	9 43 19.0	94.22	3	12 18 9.68	21.519	1 16 43.3	113.99
4	10 38 52.28	20.898	9 33 52.0	94.78	4	12 20 18.87	21.543	1 5 18.7	114.21
5	10 40 57.68	20.902	9 24 21.6	95.35	5	12 22 28.20	21.568	0 53 52.8	114.41
6	10 43 3.10	20.906	9 14 47.8	95.92	6	12 24 37.69	21.595	0 42 25.8	114.60
7	10 45 8.55	20.911	9 5 10.6	96.48	7	12 26 47.34	21.621	0 30 57.6	114.79
8	10 47 14.03	20.915	8 55 30.0	97.03	8	12 28 57.14	21.648	0 19 28.3	114.97
9	10 49 19.53	20.919	8 45 46.2	97.57	9	12 31 7.11	21.675	N. 0 7 58.0	115.13
10	10 51 25.06	20.925	8 35 59.2	98.11	10	12 33 17.24	21.703	S. 0 3 33.2	115.28
11	10 53 30.63	20.932	8 26 8.9	98.65	11	12 35 27.54	21.731	0 15 5.4	115.43
12	10 55 36.24	20.938	8 16 15.4	99.18	12	12 37 38.01	21.760	0 26 38.4	115.56
13	10 57 41.88	20.943	8 6 18.8	99.69	13	12 39 48.66	21.790	0 38 12.1	115.68
14	10 59 47.56	20.950	7 56 19.1	100.20	14	12 41 59.49	21.819	0 19 46.6	115.80
15	11 1 53.28	20.958	7 46 16.4	100.71	15	12 44 10.49	21.849	1 1 21.7	115.90
16	11 3 59.05	20.965	7 36 10.6	101.21	16	12 46 21.68	21.881	1 12 57.4	115.99
17	11 6 4.86	20.973	7 26 1.9	101.70	17	12 48 33.06	21.913	1 24 33.6	116.07
18	11 8 10.73	20.983	7 15 50.2	102.19	18	12 50 44.63	21.945	1 36 10.2	116.13
19	11 10 16.65	20.991	7 5 35.6	102.67	19	12 52 56.40	21.978	1 47 47.2	116.20
20	11 12 22.62	21.000	6 55 18.2	103.14	20	12 55 8.36	22.010	1 59 24.6	116.25
21	11 14 28.65	21.009	6 44 57.9	103.61	21	12 57 20.52	22.043	2 11 2.2	116.28
22	11 16 34.73	21.019	N. 6 34 34.9	104.07	22	12 59 32.88	22.078	S. 2 22 40.0	116.31
23	11 18 40.88	21.031			23	13 1 45.45	22.112		
TUESDAY 10.					THURSDAY 12.				
0	11 20 47.10	21.043	N. 6 24 9.1	104.53	0	13 3 58.22	22.147	S. 2 34 17.9	116.33
1	11 22 53.39	21.053	6 13 40.6	104.97	1	13 6 11.21	22.183	2 45 55.9	116.33
2	11 24 59.74	21.065	6 3 9.5	105.40	2	13 8 24.42	22.219	2 57 33.8	116.32
3	11 27 6.17	21.078	5 52 35.8	105.83	3	13 10 37.84	22.255	3 9 11.7	116.30
4	11 29 12.67	21.090	5 41 59.6	106.25	4	13 12 51.48	22.293	3 20 49.4	116.26
5	11 31 19.25	21.103	5 31 20.8	106.68	5	13 15 5.35	22.330	3 32 26.8	116.22
6	11 33 25.91	21.118	5 20 39.5	107.08	6	13 17 19.44	22.368	3 44 4.0	116.17
7	11 35 32.66	21.132	5 9 55.8	107.48	7	13 19 33.76	22.407	3 55 40.8	116.09
8	11 37 39.49	21.147	4 59 9.8	107.88	8	13 21 48.32	22.446	4 7 17.1	116.01
9	11 39 46.42	21.162	4 48 21.4	108.26	9	13 24 3.11	22.485	4 18 52.9	115.92
10	11 41 53.43	21.177	4 37 30.7	108.64	10	13 26 18.14	22.525	4 30 28.1	115.81
11	11 44 0.54	21.193	4 26 37.7	109.01	11	13 28 33.41	22.566	4 42 2.6	115.68
12	11 46 7.75	21.210	4 15 42.6	109.36	12	13 30 48.93	22.608	4 53 36.3	115.56
13	11 48 15.06	21.227	4 4 45.4	109.72	13	13 33 4.70	22.648	5 5 9.3	115.42
14	11 50 22.47	21.244	3 53 46.0	110.07	14	13 35 20.71	22.690	5 16 41.3	115.25
15	11 52 29.99	21.263	3 42 44.6	110.40	15	13 37 36.98	22.733	5 28 12.3	115.08
16	11 54 37.63	21.282	3 31 41.2	110.73	16	13 39 53.50	22.775	5 39 42.3	114.90
17	11 56 45.37	21.300	3 20 35.9	111.05	17	13 42 10.28	22.818	5 51 11.1	114.71
18	11 58 53.23	21.320	3 9 28.6	111.37	18	13 44 27.32	22.862	6 2 38.8	114.50
19	12 1 1.21	21.340	2 58 19.5	111.67	19	13 46 44.62	22.905	6 14 5.1	114.27
20	12 3 9.31	21.360	2 47 8.6	111.96	20	13 49 2.18	22.950	6 25 30.0	114.03
21	12 5 17.53	21.382	2 35 56.0	112.24	21	13 51 20.02	22.995	6 36 53.5	113.78
22	12 7 25.89	21.403	2 24 41.7	112.53	22	13 53 38.12	23.040	6 48 15.4	113.51
23	12 9 34.37	21.425	2 13 25.7	112.79	23	13 55 56.50	23.086	6 59 35.6	113.23
24	12 11 42.99	21.448	N. 2 2 8.2	113.05	24	13 58 15.15	23.132	S. 7 10 54.2	112.94

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10m.	Declination.	Var. in 10m.	Hour.	Right Ascension.	Var. in 10m.	Declination.	Var. in 10m.
FRIDAY 13.					SUNDAY 15.				
	h m s	s	S. ° ' "	"		h m s	s	S. ° ' "	"
0	13 58 15.15	23.132	7 10 54.2	112.94	0	15 54 59.02	25.513	15 10 55.4	81.16
1	14 03 4.08	23.178	7 22 10.9	112.63	1	15 57 32.24	25.559	15 18 59.2	80.12
2	14 2 53.28	23.224	7 33 25.8	112.32	2	16 0 5.73	25.605	15 26 56.8	79.07
3	14 5 12.77	23.272	7 44 38.7	111.98	3	16 2 39.50	25.650	15 34 48.0	78.00
4	14 7 32.54	23.318	7 55 49.6	111.63	4	16 5 13.53	25.694	15 42 32.8	76.93
5	14 9 52.59	23.366	8 6 58.3	111.26	5	16 7 47.83	25.738	15 50 11.1	75.83
6	14 12 12.93	23.414	8 18 4.7	110.88	6	16 10 22.39	25.782	15 57 42.8	74.73
7	14 14 33.56	23.463	8 29 8.9	110.49	7	16 12 57.21	25.825	16 5 7.8	73.60
8	14 16 54.48	23.511	8 40 10.6	110.08	8	16 15 32.29	25.867	16 12 26.0	72.46
9	14 19 15.69	23.560	8 51 9.9	109.66	9	16 18 7.61	25.908	16 19 37.3	71.32
10	14 21 37.20	23.609	9 2 6.5	109.22	10	16 20 43.18	25.949	16 26 41.8	70.16
11	14 23 59.00	23.658	9 13 0.5	108.77	11	16 23 19.00	25.989	16 33 39.2	68.98
12	14 26 21.10	23.708	9 23 51.7	108.30	12	16 25 55.05	26.027	16 40 29.5	67.79
13	14 28 43.50	23.758	9 34 40.1	107.83	13	16 28 31.33	26.067	16 47 12.7	66.59
14	14 31 6.19	23.808	9 45 25.6	107.33	14	16 31 7.85	26.105	16 53 48.6	65.38
15	14 33 29.19	23.858	9 56 8.0	106.80	15	16 33 44.59	26.142	17 0 17.2	64.16
16	14 35 52.49	23.908	10 6 47.2	106.28	16	16 36 21.55	26.178	17 6 38.5	62.93
17	14 38 16.09	23.959	10 17 23.3	105.73	17	16 38 58.72	26.213	17 12 52.3	61.67
18	14 40 40.00	24.010	10 27 56.0	105.18	18	16 41 36.10	26.248	17 18 58.5	60.41
19	14 43 4.21	24.061	10 38 25.4	104.60	19	16 44 13.69	26.281	17 24 57.2	59.14
20	14 45 28.73	24.112	10 48 51.2	104.01	20	16 46 51.47	26.313	17 30 48.2	57.86
21	14 47 53.55	24.163	10 59 13.5	103.40	21	16 49 29.45	26.345	17 36 31.5	56.57
22	14 50 18.68	24.214	11 9 32.0	102.78	22	16 52 7.61	26.376	17 42 7.0	55.26
23	14 52 44.12	24.265	11 19 46.8	102.15	23	16 54 45.96	26.406	17 47 34.6	53.95
SATURDAY 14.					MONDAY 16.				
	h m s	s	S. ° ' "	"		h m s	s	S. ° ' "	"
0	14 55 9.86	24.317	11 29 57.8	101.49	0	16 57 24.48	26.434	17 52 54.4	52.63
1	14 57 35.92	24.368	11 40 4.7	100.82	1	17 0 3.17	26.462	17 58 6.1	51.29
2	15 0 2.28	24.419	11 50 7.6	100.13	2	17 2 42.02	26.488	18 3 9.9	49.95
3	15 2 28.95	24.471	12 0 6.3	99.43	3	17 5 21.03	26.514	18 8 5.5	48.59
4	15 4 55.93	24.522	12 10 0.8	98.73	4	17 8 0.19	26.538	18 12 53.0	47.24
5	15 7 23.21	24.573	12 19 51.0	97.99	5	17 10 39.49	26.562	18 17 32.4	45.88
6	15 9 50.80	24.624	12 29 36.7	97.25	6	17 13 18.93	26.585	18 22 3.5	44.49
7	15 12 18.70	24.676	12 39 18.0	96.49	7	17 15 58.51	26.606	18 26 26.3	43.10
8	15 14 46.91	24.727	12 48 54.6	95.70	8	17 18 38.20	26.626	18 30 40.7	41.71
9	15 17 15.42	24.778	12 58 26.4	94.90	9	17 21 18.02	26.645	18 34 46.8	40.32
10	15 19 44.24	24.828	13 7 53.4	94.10	10	17 23 57.94	26.662	18 38 44.5	38.91
11	15 22 13.36	24.879	13 17 15.6	93.28	11	17 26 37.96	26.678	18 42 33.7	37.49
12	15 24 42.79	24.930	13 26 32.7	92.43	12	17 29 18.08	26.694	18 46 14.4	36.07
13	15 27 12.52	24.980	13 35 44.8	91.58	13	17 31 58.29	26.708	18 49 46.5	34.64
14	15 29 42.55	25.030	13 44 51.7	90.71	14	17 34 38.58	26.722	18 53 10.1	33.22
15	15 32 12.88	25.080	13 53 53.3	89.83	15	17 37 18.95	26.733	18 56 25.1	31.78
16	15 34 43.51	25.129	14 2 49.6	88.92	16	17 39 59.38	26.743	18 59 31.5	30.33
17	15 37 14.43	25.178	14 11 40.3	88.00	17	17 42 39.87	26.753	19 2 29.1	28.88
18	15 39 45.65	25.228	14 20 25.6	87.08	18	17 45 20.41	26.761	19 5 18.1	27.44
19	15 42 17.16	25.276	14 29 5.2	86.13	19	17 48 1.00	26.768	19 7 58.4	25.98
20	15 44 48.96	25.324	14 37 39.1	85.16	20	17 50 41.62	26.773	19 10 29.9	24.53
21	15 47 21.05	25.372	14 46 7.1	84.18	21	17 53 22.27	26.777	19 12 52.7	23.08
22	15 49 53.42	25.419	14 54 29.2	83.18	22	17 56 2.94	26.779	19 15 6.8	21.61
23	15 52 26.08	25.467	15 2 45.3	82.18	23	17 58 43.62	26.781	19 17 12.0	20.13
24	15 54 59.02	25.513	15 10 55.4	81.16	24	18 1 24.31	26.781	19 19 8.4	18.67

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
TUESDAY 17.					THURSDAY 19.				
	h m s	s	S. 19° 19' 8".4	18.67		h m s	s	S. 18° 3' 56".7	47.64
0	18 1 24.31	26.781	19 19 8.4	18.67	0	20 7 35.90	25.373	17 59 7.3	48.82
1	18 4 4.99	26.779	19 20 56.0	17.20	1	20 10 7.98	25.320	17 54 10.9	49.98
2	18 6 45.66	26.778	19 22 34.8	15.73	2	20 12 39.74	25.267	17 49 7.5	51.13
3	18 9 26.32	26.774	19 24 4.7	14.25	3	20 15 11.18	25.213	17 43 57.3	52.28
4	18 12 6.95	26.769	19 25 25.8	12.78	4	20 17 42.29	25.158	17 38 40.2	53.41
5	18 14 47.55	26.763	19 26 38.1	11.32	5	20 20 13.07	25.102	17 33 16.4	54.53
6	18 17 28.10	26.754	19 27 41.6	9.84	6	20 22 43.51	25.046	17 27 45.9	55.63
7	18 20 8.60	26.746	19 28 36.2	8.36	7	20 25 13.62	24.990	17 22 8.8	56.72
8	18 22 49.05	26.736	19 29 21.9	6.89	8	20 27 43.39	24.933	17 16 25.3	57.79
9	18 25 29.43	26.723	19 29 58.9	5.43	9	20 30 12.82	24.877	17 10 35.3	58.87
10	18 28 9.73	26.711	19 30 27.0	3.95	10	20 32 41.91	24.819	17 4 38.9	59.92
11	18 30 49.96	26.697	19 30 46.3	2.48	11	20 35 10.65	24.761	16 58 36.3	60.95
12	18 33 30.09	26.681	19 30 56.8	1.02	12	20 37 39.04	24.702	16 52 27.5	61.98
13	18 36 10.13	26.665	19 30 58.5	0.44	13	20 40 7.07	24.643	16 46 12.5	63.00
14	18 38 50.07	26.647	19 30 51.5	1.90	14	20 42 34.75	24.584	16 39 51.5	64.00
15	18 41 29.89	26.627	19 30 35.7	3.36	15	20 45 2.08	24.525	16 33 24.5	64.98
16	18 44 9.59	26.607	19 30 11.2	4.82	16	20 47 29.05	24.465	16 26 51.7	65.96
17	18 46 49.17	26.585	19 29 37.9	6.27	17	20 49 55.66	24.405	16 20 13.0	66.93
18	18 49 28.61	26.563	19 28 56.0	7.70	18	20 52 21.91	24.345	16 13 28.6	67.88
19	18 52 7.92	26.538	19 28 5.5	9.14	19	20 54 47.80	24.284	16 6 38.5	68.81
20	18 54 47.07	26.512	19 27 6.3	10.58	20	20 57 13.32	24.223	15 59 42.9	69.73
21	18 57 26.06	26.485	19 25 58.5	12.02	21	20 59 38.48	24.163	15 52 41.8	70.63
22	19 0 4.89	26.458	19 24 42.1	13.44	22	21 2 3.27	24.102	15 45 35.3	71.53
23	19 2 43.55	26.428	S. 19 23 17.2	14.86	23	21 4 27.70	24.041		
WEDNESDAY 18.					FRIDAY 20.				
	h m s	s	S. 19 21 43.8	16.27		h m s	s	S. 15 38 23.5	72.41
0	19 5 22.03	26.398	19 20 2.0	17.67	0	21 6 51.76	23.979	15 31 6.4	73.28
1	19 8 0.33	26.368	19 18 11.8	19.08	1	21 9 15.45	23.918	15 23 44.2	74.13
2	19 10 38.44	26.334	19 16 13.1	20.47	2	21 11 38.78	23.857	15 16 16.8	74.98
3	19 13 16.34	26.300	19 14 6.2	21.85	3	21 14 1.73	23.795	15 8 44.5	75.80
4	19 15 54.04	26.266	19 11 50.9	23.23	4	21 16 24.32	23.733	15 1 7.2	76.62
5	19 18 31.53	26.231	19 9 27.4	24.60	5	21 18 46.53	23.672	14 53 25.1	77.42
6	19 21 8.81	26.194	19 6 55.7	25.97	6	21 21 8.38	23.611	14 45 38.2	78.20
7	19 23 45.86	26.156	19 4 15.8	27.32	7	21 23 29.86	23.549	14 37 46.7	78.98
8	19 26 22.68	26.117	19 1 27.9	28.66	8	21 25 50.97	23.488	14 29 50.5	79.74
9	19 28 59.26	26.077	18 58 31.9	29.99	9	21 28 11.71	23.426	14 21 49.8	80.49
10	19 31 35.60	26.036	18 55 28.0	31.32	10	21 30 32.08	23.365	14 13 44.6	81.23
11	19 34 11.69	25.994	18 52 16.1	32.64	11	21 32 52.09	23.304	14 5 35.1	81.95
12	19 36 47.53	25.952	18 48 56.3	33.95	12	21 35 11.73	23.243	13 57 21.2	82.66
13	19 39 23.11	25.908	18 45 28.7	35.24	13	21 37 31.00	23.182	13 49 3.2	83.35
14	19 41 58.42	25.863	18 41 53.4	36.53	14	21 39 49.91	23.121	13 40 41.0	84.03
15	19 44 33.46	25.818	18 38 10.4	37.81	15	21 42 8.45	23.060	13 32 14.8	84.71
16	19 47 8.23	25.772	18 34 19.7	39.08	16	21 44 26.63	23.000	13 23 44.5	85.37
17	19 49 42.72	25.725	18 30 21.5	40.33	17	21 46 44.45	22.940	13 15 10.4	86.01
18	19 52 16.93	25.677	18 26 15.7	41.58	18	21 49 1.91	22.879	13 6 32.4	86.64
19	19 54 50.84	25.628	18 22 2.5	42.81	19	21 51 19.00	22.819	12 57 50.7	87.26
20	19 57 24.46	25.578	18 17 42.0	44.03	20	21 53 35.74	22.760	12 49 5.3	87.87
21	19 59 57.78	25.528	18 13 14.1	45.25	21	21 55 52.12	22.701	12 40 16.3	88.46
22	20 2 30.79	25.477	18 8 39.0	46.45	22	21 58 8.15	22.642	12 31 23.8	89.04
23	20 5 3.50	25.426			23	22 0 23.82	22.583		
24	20 7 35.90	25.373	S. 18 3 56.7	47.64	24	22 2 39.14	22.524	S. 12 22 27.8	89.62

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
SATURDAY 21.					MONDAY 23.				
	h m s	s	S. 12 22 27.8	89.62		h m s	s	S. 4 28 4.4	104.17
0	22 2 39.14	22.524	12 13 28.4	90.18	0	23 44 49.07	20.237	4 17 39.2	104.23
1	22 4 54.11	22.467	12 4 25.7	90.72	1	23 46 50.39	20.203	4 7 13.6	104.30
2	22 7 8.74	22.409	11 55 19.8	91.25	2	23 48 51.50	20.168	3 56 47.6	104.37
3	22 9 23.02	22.351	11 46 10.7	91.77	3	23 50 52.40	20.134	3 46 21.2	104.42
4	22 11 36.95	22.293	11 36 58.6	92.28	4	23 52 53.11	20.103	3 35 54.6	104.45
5	22 13 50.54	22.237	11 27 43.4	92.78	5	23 54 53.63	20.070	3 25 27.8	104.48
6	22 16 3.79	22.180	11 18 25.3	93.26	6	23 56 53.95	20.038	3 15 0.8	104.52
7	22 18 16.70	22.124	11 9 4.3	93.73	7	23 58 54.08	20.007	3 4 33.6	104.53
8	22 20 29.28	22.068	10 59 40.5	94.19	8	0 0 54.03	19.978	2 54 6.4	104.55
9	22 22 41.52	22.012	10 50 14.0	94.65	9	0 2 53.81	19.948	2 43 39.0	104.56
10	22 24 53.43	21.958	10 40 44.7	95.09	10	0 4 53.40	19.918	2 33 11.7	104.55
11	22 27 5.01	21.903	10 31 12.9	95.51	11	0 6 52.82	19.889	2 22 44.4	104.54
12	22 29 16.27	21.850	10 21 38.6	95.93	12	0 8 52.07	19.861	2 12 17.2	104.53
13	22 31 27.21	21.796	10 12 1.7	96.34	13	0 10 51.15	19.833	2 1 50.1	104.50
14	22 33 37.82	21.743	10 2 22.5	96.73	14	0 12 50.06	19.806	1 51 23.2	104.47
15	22 35 48.12	21.690	9 52 40.9	97.12	15	0 14 48.82	19.780	1 40 56.5	104.43
16	22 37 58.10	21.638	9 42 57.1	97.48	16	0 16 47.42	19.754	1 30 30.0	104.39
17	22 40 7.77	21.585	9 33 11.1	97.84	17	0 18 45.87	19.729	1 20 3.8	104.33
18	22 42 17.12	21.533	9 23 23.0	98.20	18	0 20 44.17	19.705	1 9 38.0	104.28
19	22 44 26.17	21.483	9 13 32.7	98.54	19	0 22 42.33	19.681	0 59 12.5	104.22
20	22 46 34.92	21.433	9 3 40.5	98.87	20	0 24 40.34	19.657	0 48 47.4	104.14
21	22 48 43.36	21.383	8 53 46.3	99.19	21	0 26 38.21	19.633	0 38 22.8	104.07
22	22 50 51.51	21.333	8 43 50.2	99.51	22	0 28 35.94	19.612	0 27 58.6	103.98
23	22 52 59.36	21.284			23	0 30 33.55	19.590		
SUNDAY 22.					TUESDAY 24.				
0	22 55 6.92	21.237	8 33 52.2	99.80	0	0 32 31.02	19.568	S. 0 17 35.0	103.88
1	22 57 14.20	21.188	8 23 52.6	100.08	1	0 34 28.37	19.548	S. 0 7 12.0	103.79
2	22 59 21.18	21.140	8 13 51.2	100.37	2	0 36 25.60	19.528	N. 0 3 10.5	103.68
3	23 1 27.88	21.094	8 3 48.2	100.64	3	0 38 22.71	19.508	0 13 32.2	103.57
4	23 3 34.31	21.048	7 53 43.5	100.90	4	0 40 19.70	19.489	0 33 53.3	103.46
5	23 5 40.45	21.001	7 43 37.4	101.14	5	0 42 16.58	19.472	0 34 13.7	103.34
6	23 7 46.32	20.956	7 33 29.8	101.39	6	0 44 13.36	19.454	0 44 33.4	103.21
7	23 9 51.92	20.912	7 23 20.7	101.62	7	0 46 10.03	19.436	0 54 52.2	103.07
8	23 11 57.26	20.868	7 13 10.4	101.83	8	0 48 6.59	19.419	1 5 10.2	102.93
9	23 14 2.33	20.823	7 2 58.7	102.05	9	0 50 3.06	19.404	1 15 27.4	102.78
10	23 16 7.14	20.781	6 52 45.8	102.26	10	0 51 59.44	19.388	1 25 43.6	102.63
11	23 18 11.70	20.738	6 42 31.6	102.45	11	0 53 55.72	19.373	1 35 58.9	102.47
12	23 20 16.00	20.696	6 32 16.4	102.63	12	0 55 51.91	19.358	1 46 13.2	102.30
13	23 22 20.05	20.654	6 22 0.1	102.81	13	0 57 48.02	19.344	1 56 26.5	102.13
14	23 24 23.85	20.613	6 11 42.7	102.98	14	0 59 44.04	19.331	2 6 38.7	101.95
15	23 26 27.41	20.574	6 1 24.4	103.13	15	1 1 39.99	19.318	2 16 49.9	101.78
16	23 28 30.74	20.534	5 51 5.2	103.28	16	1 3 35.86	19.306	2 27 0.0	101.58
17	23 30 33.82	20.494	5 40 45.1	103.42	17	1 5 31.66	19.294	2 37 8.8	101.38
18	23 32 36.67	20.456	5 30 24.2	103.55	18	1 7 27.39	19.283	2 47 16.5	101.18
19	23 34 39.29	20.418	5 20 2.5	103.68	19	1 9 23.06	19.273	2 57 23.0	100.98
20	23 36 41.69	20.381	5 9 40.1	103.78	20	1 11 18.66	19.262	3 7 28.2	100.76
21	23 38 43.86	20.343	4 59 17.1	103.89	21	1 13 14.20	19.253	3 17 32.1	100.54
22	23 40 45.81	20.308	4 48 53.4	103.99	22	1 15 9.69	19.244	3 27 34.7	100.33
23	23 42 47.55	20.272	4 38 29.2	104.08	23	1 17 5.13	19.235	3 37 36.0	100.09
24	23 44 49.07	20.237	4 28 4.4	104.17	24	1 19 0.51	19.227	N. 3 47 35.8	99.86

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in rom.	Declination.	Var. in rom.	Hour.	Right Ascension.	Var. in rom.	Declination.	Var. in rom.
WEDNESDAY 25.					FRIDAY 27.				
	h m s	s	N.			h m s	s	N.	
0	1 19 0.51	19.227	3 47 35.8	99.86	0	2 51 15.55	19.374	11 9 37.1	82.32
1	1 20 55.85	19.219	3 57 34.3	99.62	1	2 53 11.83	19.386	11 17 49.6	81.83
2	1 22 51.14	19.212	4 7 31.2	99.37	2	2 55 8.18	19.399	11 25 59.0	81.32
3	1 24 46.39	19.205	4 17 26.7	99.12	3	2 57 4.62	19.413	11 34 5.4	80.82
4	1 26 41.60	19.199	4 27 20.6	98.86	4	2 59 1.13	19.425	11 42 8.8	80.32
5	1 28 36.78	19.194	4 37 13.0	98.60	5	3 0 57.72	19.439	11 50 9.2	79.80
6	1 30 31.93	19.189	4 47 3.8	98.33	6	3 2 54.40	19.453	11 58 6.4	79.28
7	1 32 27.05	19.184	4 56 53.0	98.06	7	3 4 51.16	19.468	12 6 0.6	78.77
8	1 34 22.14	19.180	5 6 40.5	97.78	8	3 6 48.01	19.482	12 13 51.6	78.23
9	1 36 17.21	19.177	5 16 26.3	97.49	9	3 8 44.94	19.497	12 21 39.4	77.69
10	1 38 12.26	19.173	5 26 10.4	97.20	10	3 10 41.97	19.513	12 29 23.9	77.16
11	1 40 7.29	19.170	5 35 52.7	96.91	11	3 12 39.09	19.528	12 37 5.3	76.62
12	1 42 2.30	19.168	5 45 33.3	96.61	12	3 14 36.30	19.543	12 44 43.3	76.07
13	1 43 57.31	19.168	5 55 12.0	96.30	13	3 16 33.60	19.558	12 52 18.1	75.52
14	1 45 52.31	19.166	6 4 48.9	95.99	14	3 18 31.00	19.575	12 59 49.5	74.96
15	1 47 47.30	19.165	6 14 23.9	95.68	15	3 20 28.50	19.591	13 7 17.6	74.39
16	1 49 42.29	19.164	6 23 57.0	95.35	16	3 22 26.09	19.608	13 14 42.2	73.83
17	1 51 37.27	19.164	6 33 28.1	95.03	17	3 24 23.79	19.624	13 22 3.5	73.26
18	1 53 32.26	19.166	6 42 57.3	94.69	18	3 26 21.58	19.641	13 29 21.3	72.68
19	1 55 27.26	19.167	6 52 24.4	94.35	19	3 28 19.48	19.658	13 36 35.6	72.08
20	1 57 22.26	19.168	7 1 49.5	94.01	20	3 30 17.48	19.676	13 43 46.3	71.50
21	1 59 17.27	19.169	7 11 12.5	93.66	21	3 32 15.59	19.693	13 50 53.6	70.91
22	2 1 12.29	19.173	7 20 33.4	93.31	22	3 34 13.80	19.711	13 57 57.2	70.31
23	2 3 7.34	19.176	N. 7 29 52.2	92.96	23	3 36 12.12	19.729	N. 14 4 57.3	69.71
THURSDAY 26.					SATURDAY 28.				
	h m s	s	N.			h m s	s	N.	
0	2 5 2.40	19.178	7 39 8.9	92.59	0	3 38 10.55	19.747	14 11 53.7	69.10
1	2 6 57.48	19.182	7 48 23.3	92.22	1	3 40 9.08	19.765	14 18 46.5	68.49
2	2 8 52.58	19.186	7 57 35.5	91.84	2	3 42 7.73	19.783	14 25 35.6	67.87
3	2 10 47.71	19.190	8 6 45.4	91.46	3	3 44 6.48	19.802	14 32 20.9	67.24
4	2 12 42.86	19.195	8 15 53.0	91.08	4	3 46 5.35	19.821	14 39 2.5	66.62
5	2 14 38.05	19.201	8 24 58.4	90.69	5	3 48 4.33	19.839	14 45 40.3	65.98
6	2 16 33.27	19.207	8 34 1.3	90.29	6	3 50 3.42	19.858	14 52 14.3	65.35
7	2 18 28.53	19.213	8 43 1.9	89.89	7	3 52 2.63	19.878	14 58 44.5	64.70
8	2 20 23.82	19.219	8 52 0.0	89.48	8	3 54 1.95	19.897	15 5 10.7	64.05
9	2 22 19.16	19.226	9 0 55.7	89.08	9	3 56 1.39	19.917	15 11 33.1	63.40
10	2 24 14.53	19.233	9 9 49.0	88.67	10	3 58 0.95	19.936	15 17 51.5	62.74
11	2 26 9.96	19.242	9 18 39.7	88.24	11	4 0 0.62	19.955	15 24 6.0	62.08
12	2 28 5.43	19.249	9 27 27.9	87.83	12	4 2 0.41	19.974	15 30 16.5	61.42
13	2 30 0.95	19.258	9 36 13.6	87.39	13	4 4 0.31	19.994	15 36 23.0	60.74
14	2 31 56.52	19.266	9 44 56.6	86.95	14	4 6 0.34	20.014	15 42 25.4	60.06
15	2 33 52.14	19.275	9 53 37.0	86.51	15	4 8 0.48	20.034	15 48 23.7	59.38
16	2 35 47.82	19.286	10 2 14.7	86.07	16	4 10 0.75	20.054	15 54 18.0	58.70
17	2 37 43.57	19.296	10 10 49.8	85.62	17	4 12 1.13	20.074	16 0 8.1	58.00
18	2 39 39.37	19.305	10 19 22.1	85.16	18	4 14 1.64	20.094	16 5 54.0	57.30
19	2 41 35.23	19.316	10 27 51.7	84.70	19	4 16 2.26	20.114	16 11 35.7	56.60
20	2 43 31.16	19.327	10 36 18.5	84.23	20	4 18 3.01	20.135	16 17 13.2	55.90
21	2 45 27.15	19.338	10 44 42.4	83.76	21	4 20 3.88	20.154	16 22 46.5	55.18
22	2 47 23.21	19.349	10 53 3.6	83.28	22	4 22 4.86	20.174	16 28 15.4	54.47
23	2 49 19.34	19.362	11 1 21.8	82.79	23	4 24 5.97	20.195	16 33 40.1	53.75
24	2 51 15.55	19.374	N. 11 9 37.1	82.32	24	4 26 7.20	20.216	N. 16 39 0.4	53.03

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
SUNDAY 29.					MONDAY 30.				
	h m s	s	N. 16 39 0.4	53.03		h m s	s	N. 18 24 17.9	34.31
0	4 26 7.20	20.216	16 44 16.4	52.30	0	5 15 12.60	20.685	18 27 41.3	33.48
1	4 28 8.56	20.236	16 49 28.0	51.56	1	5 17 16.77	20.703	18 30 59.7	32.65
2	4 30 10.03	20.256	16 54 35.1	50.82	2	5 19 21.04	20.721	18 34 13.1	31.81
3	4 32 11.63	20.276	16 59 37.8	50.08	3	5 21 25.42	20.739	18 37 21.4	30.97
4	4 34 13.34	20.296	17 4 36.0	49.33	4	5 23 29.91	20.758	18 40 24.7	30.13
5	4 36 15.18	20.317	17 9 29.8	48.58	5	5 25 34.51	20.774	18 43 22.9	29.28
6	4 38 17.14	20.337	17 14 19.0	47.82	6	5 27 39.20	20.791	18 46 16.0	28.43
7	4 40 19.22	20.357	17 19 3.6	47.06	7	5 29 44.00	20.809	18 49 4.0	27.58
8	4 42 21.42	20.377	17 23 43.7	46.30	8	5 31 48.91	20.826	18 51 46.9	26.72
9	4 44 23.74	20.397	17 32 50.0	44.75	9	5 33 53.91	20.842	18 54 24.6	25.85
10	4 46 26.18	20.417	17 37 16.2	43.98	10	5 35 59.01	20.858	18 56 57.1	24.98
11	4 48 28.74	20.436	17 41 37.7	43.18	11	5 38 4.21	20.875	18 59 24.4	24.12
12	4 50 31.41	20.456	17 45 54.4	42.40	12	5 40 9.51	20.891	19 1 46.5	23.25
13	4 52 34.21	20.476	17 50 6.5	41.62	13	5 42 14.90	20.907	19 4 3.4	22.38
14	4 54 37.12	20.495	17 54 13.8	40.82	14	5 44 20.39	20.923	19 6 15.1	21.51
15	4 56 40.15	20.515	17 58 16.3	40.02	15	5 46 25.97	20.938	19 8 21.5	20.62
16	4 58 43.30	20.535	18 2 14.0	39.22	16	5 48 31.64	20.953	19 10 22.5	19.73
17	5 0 46.57	20.554	18 6 6.9	38.41	17	5 50 37.40	20.967	19 12 18.3	18.86
18	5 2 49.95	20.573	18 9 54.9	37.59	18	5 52 43.24	20.982	19 14 8.8	17.97
19	5 4 53.44	20.592	18 13 38.0	36.78	19	5 54 49.18	20.997	19 15 53.9	17.08
20	5 6 57.05	20.611	18 17 16.3	35.97	20	5 56 55.20	21.010	19 17 33.7	16.18
21	5 9 0.77	20.629	18 20 49.6	35.13	21	5 59 1.30	21.023	19 19 8.1	15.29
22	5 11 4.60	20.648	N. 18 24 17.9	34.31	22	6 1 7.48	21.037	19 20 37.2	14.40
23	5 13 8.55	20.667			23	6 3 13.74	21.050	N. 19 22 0.9	13.49
24	5 15 12.60	20.685			24	6 5 20.08	21.063		

PHASES OF THE MOON.

June 2	● New Moon	- - - - -	h m
10	☾ First Quarter	- - - - -	1 36.9
16	○ Full Moon	- - - - -	16 41.4
23	☾ Last Quarter	- - - - -	14 16.0
June 1	☾ Apogee	- - - - -	h
16	☾ Perigee	- - - - -	3.1
28	☾ Apogee	- - - - -	23.4

AT APPARENT NOON.

Date.	THE SUN'S				Sidereal Time of the Semi- diameter passing the Meridian.*	Equation of Time, to be added to Apparent Time.	Var. in 1 hour.
	Apparent Right Ascension.	Var. in 1 hour.	Apparent Declination.	Var. in 1 hour.			
	h m s	s	° ' "	"	m s	m s	s
Tues.	1 6 40 39.47	10.345	N.23 7 3.5	10.04	1 8.72	3 36.26	0.487
Wed.	2 6 44 47.62	10.334	23 2 50.4	11.05	1 8.68	3 47.82	0.476
Thur.	3 6 48 55.49	10.322	22 58 13.1	12.05	1 8.64	3 59.10	0.464
Frid.	4 6 53 3.06	10.309	22 53 11.8	13.05	1 8.60	4 10.08	0.451
Sat.	5 6 57 10.31	10.295	22 47 46.6	14.05	1 8.56	4 20.75	0.437
Sun.	6 7 1 17.21	10.280	22 41 57.6	15.03	1 8.51	4 31.06	0.422
Mon.	7 7 5 23.73	10.264	22 35 45.0	16.01	1 8.46	4 41.00	0.406
Tues.	8 7 9 29.86	10.247	22 29 9.0	16.99	1 8.40	4 50.55	0.389
Wed.	9 7 13 35.58	10.229	22 22 9.6	17.96	1 8.35	4 59.69	0.372
Thur.	10 7 17 40.87	10.211	22 14 47.0	18.92	1 8.29	5 8.40	0.354
Frid.	11 7 21 45.71	10.192	22 7 1.5	19.87	1 8.23	5 16.66	0.334
Sat.	12 7 25 50.08	10.172	21 58 53.2	20.82	1 8.17	5 24.45	0.315
Sun.	13 7 29 53.98	10.152	21 50 22.3	21.75	1 8.10	5 31.77	0.295
Mon.	14 7 33 57.39	10.131	21 41 29.0	22.68	1 8.04	5 38.60	0.274
Tues.	15 7 38 0.29	10.110	21 32 13.5	23.60	1 7.97	5 44.94	0.253
Wed.	16 7 42 2.69	10.089	21 22 36.0	24.51	1 7.89	5 50.76	0.232
Thur.	17 7 46 4.57	10.068	21 12 36.7	25.42	1 7.82	5 56.08	0.211
Frid.	18 7 50 5.94	10.046	21 2 15.8	26.31	1 7.75	6 0.87	0.189
Sat.	19 7 54 6.78	10.024	20 51 33.6	27.20	1 7.67	6 5.14	0.167
Sun.	20 7 58 7.09	10.001	20 40 30.2	28.08	1 7.59	6 8.88	0.145
Mon.	21 8 2 6.85	9.979	20 29 6.0	28.94	1 7.51	6 12.08	0.122
Tues.	22 8 6 6.07	9.956	20 17 21.1	29.80	1 7.43	6 14.74	0.099
Wed.	23 8 10 4.74	9.933	20 5 15.8	30.64	1 7.35	6 16.85	0.076
Thur.	24 8 14 2.85	9.909	19 52 50.3	31.48	1 7.27	6 18.39	0.053
Frid.	25 8 18 0.38	9.885	19 40 4.9	32.30	1 7.18	6 19.37	0.029
Sat.	26 8 21 57.35	9.861	19 27 0.0	33.11	1 7.10	6 19.78	0.005
Sun.	27 8 25 53.73	9.837	19 13 35.6	33.91	1 7.01	6 19.61	0.019
Mon.	28 8 29 49.52	9.812	18 59 52.1	34.70	1 6.93	6 18.85	0.044
Tues.	29 8 33 44.73	9.788	18 45 49.8	35.48	1 6.84	6 17.50	0.069
Wed.	30 8 37 39.34	9.763	18 31 29.0	36.25	1 6.75	6 15.56	0.093
Thur.	31 8 41 33.34	9.737	18 16 49.9	37.00	1 6.67	6 13.02	0.119
Frid.	32 8 45 26.74	9.712	N.18 1 52.9	37.74	1 6.58	6 9.87	0.144

* Mean Time of the Semidiameter passing may be found by subtracting 0.19 from the Sidereal Time.

AT MEAN NOON.

		THE SUN'S			Equation of Time, to be added to Apparent Time.	Sidereal Time.
Date.		Apparent Right Ascension.	Apparent Declination.	Semi- diameter.*		
		h m s	N. ° ' "	' "	m s	h m s
Tues.	1	6 40 38.85	N. 23 7 4.2	15 45.30	3 36.23	6 37 2.62
Wed.	2	6 44 46.96	23 2 51.1	15 45.30	3 47.79	6 40 59.18
Thur.	3	6 48 54.80	22 58 13.9	15 45.29	3 59.07	6 44 55.74
Frid.	4	6 53 2.34	22 53 12.7	15 45.30	4 10.05	6 48 52.29
Sat.	5	6 57 9.56	22 47 47.6	15 45.30	4 20.71	6 52 48.85
Sun.	6	7 1 16.43	22 41 58.8	15 45.32	4 31.03	6 56 45.40
Mon.	7	7 5 22.93	22 35 46.3	15 45.34	4 40.97	7 0 41.96
Tues.	8	7 9 29.04	22 29 10.3	15 45.36	4 50.52	7 4 38.52
Wed.	9	7 13 34.73	22 22 11.1	15 45.39	4 59.66	7 8 35.08
Thur.	10	7 17 40.00	22 14 48.6	15 45.42	5 8.37	7 12 31.63
Frid.	11	7 21 44.81	22 7 3.2	15 45.46	5 16.63	7 16 28.19
Sat.	12	7 25 49.17	21 58 55.1	15 45.50	5 24.42	7 20 24.74
Sun.	13	7 29 53.04	21 50 24.3	15 45.55	5 31.74	7 24 21.30
Mon.	14	7 33 56.43	21 41 31.1	15 45.59	5 38.58	7 28 17.86
Tues.	15	7 37 59.32	21 32 15.8	15 45.65	5 44.91	7 32 14.41
Wed.	16	7 42 1.71	21 22 38.4	15 45.70	5 50.74	7 36 10.97
Thur.	17	7 46 3.58	21 12 39.2	15 45.76	5 56.05	7 40 7.52
Frid.	18	7 50 4.93	21 2 18.5	15 45.82	6 0.85	7 44 4.08
Sat.	19	7 54 5.76	20 51 36.4	15 45.88	6 5.13	7 48 0.64
Sun.	20	7 58 6.06	20 40 33.1	15 45.95	6 8.87	7 51 57.19
Mon.	21	8 2 5.82	20 29 9.0	15 46.02	6 12.07	7 55 53.75
Tues.	22	8 6 5.04	20 17 24.2	15 46.09	6 14.73	7 59 50.30
Wed.	23	8 10 3.70	20 5 19.0	15 46.17	6 16.84	8 3 46.86
Thur.	24	8 14 1.80	19 52 53.6	15 46.25	6 18.39	8 7 43.42
Frid.	25	8 17 59.34	19 40 8.3	15 46.34	6 19.37	8 11 39.97
Sat.	26	8 21 56.31	19 27 3.4	15 46.43	6 19.78	8 15 36.53
Sun.	27	8 25 52.69	19 13 39.2	15 46.53	6 19.61	8 19 33.08
Mon.	28	8 29 48.49	18 59 55.8	15 46.63	6 18.86	8 23 29.64
Tues.	29	8 33 43.70	18 45 53.5	15 46.74	6 17.51	8 27 26.19
Wed.	30	8 37 38.32	18 31 32.8	15 46.85	6 15.57	8 31 22.75
Thur.	31	8 41 32.33	18 16 53.8	15 46.96	6 13.03	8 35 19.30
Frid.	32	8 45 25.74	N. 18 1 56.8	15 47.08	6 9.89	8 39 15.86

* The Semidiameter for *Apparent* Noon may be assumed the same as that for *Mean* Noon.

MEAN TIME.

Day.	THE SUN'S <i>Apparent</i>		Logarithm of the Radius Vector of the Earth.	Transit of the First Point of Aries.	THE MOON'S			
	Longitude.	Latitude.			Semidiameter.		Horizontal Parallax.	
	Noon.	Noon.			Noon.	Midnight.	Noon.	Midnight.
				h m s				
1	99 20 17.6	S. 0.44	0.0072332	17 20 6.51	14 45.93	14 47.73	54 11.51	54 18.09
2	100 17 30.7	0.36	0.0072372	17 16 10.60	14 49.85	14 52.28	54 25.87	54 34.78
3	101 14 43.8	0.25	0.0072387	17 12 14.69	14 55.00	14 58.01	54 44.78	54 55.83
4	102 11 56.7	0.13	0.0072375	17 8 18.78	15 1.30	15 4.88	55 7.91	55 21.03
5	103 9 9.6	S. 0.01	0.0072338	17 4 22.87	15 8.74	15 12.88	55 35.19	55 50.38
6	104 6 22.4	N. 0.11	0.0072277	17 0 26.96	15 17.30	15 22.00	56 6.62	56 23.88
7	105 3 35.0	0.23	0.0072190	16 56 31.05	15 26.98	15 32.21	56 42.14	57 1.34
8	106 0 47.5	0.34	0.0072080	16 52 35.14	15 37.67	15 43.33	57 21.39	57 42.17
9	106 57 59.8	0.43	0.0071948	16 48 39.23	15 49.14	15 55.03	58 3.48	58 25.09
10	107 55 12.1	0.50	0.0071795	16 44 43.32	16 0.91	16 6.70	58 46.69	59 7.92
11	108 52 24.2	0.53	0.0071622	16 40 47.41	16 12.27	16 17.50	59 28.38	59 47.58
12	109 49 36.3	0.53	0.0071431	16 36 51.50	16 22.25	16 26.28	60 5.00	60 20.14
13	110 46 48.5	0.50	0.0071224	16 32 55.59	16 29.74	16 32.21	60 32.48	60 41.55
14	111 44 0.7	0.44	0.0071002	16 28 59.68	16 33.68	16 34.06	60 46.94	60 48.33
15	112 41 13.1	0.35	0.0070765	16 25 3.77	16 33.30	16 31.40	60 45.56	60 38.59
16	113 38 25.7	0.23	0.0070514	16 21 7.86	16 28.39	16 24.32	60 27.52	60 12.61
17	114 35 38.8	N. 0.10	0.0070250	16 17 11.95	16 19.32	16 13.51	59 54.24	59 32.91
18	115 32 52.4	S. 0.04	0.0069973	16 13 16.04	16 7.04	16 0.09	59 9.18	58 43.66
19	116 30 6.6	0.18	0.0069681	16 9 20.13	15 52.82	15 45.40	58 16.98	57 49.76
20	117 27 21.5	0.32	0.0069374	16 5 24.22	15 37.99	15 30.74	57 22.57	56 55.94
21	118 24 37.2	0.45	0.0069051	16 1 28.31	15 23.76	15 17.18	56 30.34	56 6.17
22	119 21 53.6	0.55	0.0068711	15 57 32.40	15 11.07	15 5.52	55 43.76	55 23.37
23	120 19 11.0	0.62	0.0068352	15 53 36.49	15 0.57	14 56.26	55 5.21	54 49.42
24	121 16 29.2	0.67	0.0067974	15 49 40.58	14 52.63	14 49.68	54 36.08	54 25.24
25	122 13 48.4	0.69	0.0067576	15 45 44.67	14 47.40	14 45.80	54 16.90	54 11.02
26	123 11 8.5	0.69	0.0067156	15 41 48.76	14 44.86	14 44.53	54 7.55	54 6.36
27	124 8 29.5	0.66	0.0066714	15 37 52.85	14 44.81	14 45.64	54 7.36	54 10.41
28	125 5 51.5	0.60	0.0066250	15 33 56.94	14 46.98	14 48.79	54 15.34	54 22.00
29	126 3 14.4	0.52	0.0065763	15 30 1.03	14 51.03	14 53.64	54 30.21	54 39.78
30	127 0 38.2	0.42	0.0065252	15 26 5.12	14 56.57	14 59.78	54 50.55	55 2.33
31	127 58 2.9	0.30	0.0064717	15 22 9.21	15 3.23	15 6.86	55 14.97	55 28.31
32	128 55 28.5	S. 0.17	0.0064158	15 18 13.30	15 10.65	15 14.56	55 42.22	55 56.56

MEAN TIME.

THE MOON'S							
Day.	Longitude.		Latitude.		Age.	Meridian Passage.	
	Noon.	Midnight.	Noon.	Midnight.	Noon.	Upper.	Lower.
	[°] _' ["]	[°] _' ["]	[°] _' ["]	[°] _' ["]	d	h m	h m
1	91 15 41.0	97 14 42.3	S. 4 4 26.8	S. 3 43 34.9	28.89	* *	11 51.4
2	103 15 2.5	109 16 53.2	3 20 8.0	2 54 19.0	0.26	0 15.7	12 40.1
3	115 20 26.0	121 25 52.9	2 26 22.5	1 56 34.5	1.26	1 4.5	13 28.9
4	127 33 27.1	133 43 22.8	1 25 13.1	S. 0 52 37.5	2.26	1 53.2	14 17.3
5	139 55 55.7	146 11 22.6	S. 0 19 8.5	N. 0 14 52.2	3.26	2 41.3	15 5.2
6	152 30 1.9	158 52 13.1	N. 0 49 1.0	1 22 53.9	4.26	3 29.0	15 52.7
7	165 18 16.5	171 48 32.6	1 56 5.4	2 28 9.5	5.26	4 16.4	16 40.1
8	178 23 21.5	185 3 2.0	2 58 39.1	3 27 6.6	6.26	5 4.0	17 28.1
9	191 47 50.8	198 38 1.0	3 53 4.3	4 16 4.4	7.26	5 52.5	18 17.4
10	205 33 40.7	212 34 52.2	4 35 39.6	4 51 23.9	8.26	6 42.8	19 8.8
11	219 41 30.8	226 53 22.5	5 2 53.2	5 9 46.7	9.26	7 35.6	20 3.1
12	234 10 4.7	241 31 4.8	5 11 47.4	5 8 43.8	10.26	8 31.5	21 0.7
13	248 55 40.9	256 23 2.1	5 0 30.7	4 47 10.2	11.26	9 30.5	22 1.0
14	263 52 10.0	271 22 0.9	4 28 52.4	4 5 55.3	12.26	10 31.9	23 2.9
15	278 51 28.0	286 19 24.5	3 38 44.9	3 7 53.9	13.26	11 33.9	* *
16	293 44 45.2	301 6 30.6	2 34 0.4	1 57 46.6	14.26	12 34.8	0 4.6
17	308 23 48.0	315 35 53.2	1 19 56.5	N. 0 41 14.2	15.26	13 32.8	1 4.2
18	322 42 11.6	329 42 19.1	N. 0 2 22.1	S. 0 36 0.0	16.26	14 27.3	2 0.5
19	336 36 1.0	343 23 12.5	S. 1 13 16.6	1 48 56.6	17.26	15 18.2	2 53.2
20	350 3 57.1	356 38 25.8	2 22 33.2	2 53 44.8	18.26	16 6.1	3 42.5
21	3 6 56.2	9 29 51.1	3 22 13.7	3 47 46.2	19.26	16 51.9	4 29.2
22	15 47 37.3	22 0 44.8	4 10 12.0	4 29 23.3	20.26	17 36.3	5 14.2
23	28 9 45.8	34 15 13.8	4 45 15.1	4 57 43.9	21.26	18 20.2	5 58.3
24	40 17 42.6	46 17 46.5	5 6 48.1	5 12 26.7	22.26	19 4.4	6 42.3
25	52 15 58.8	58 12 52.2	5 14 40.5	5 13 30.7	23.26	19 49.3	7 26.7
26	64 8 58.0	70 4 45.6	5 8 59.7	5 1 10.7	24.26	20 35.4	8 12.2
27	76 0 42.8	81 57 15.2	4 50 7.9	4 35 56.6	25.26	21 22.6	8 58.9
28	87 54 46.3	93 53 37.7	4 18 43.5	3 58 36.5	26.26	22 11.0	9 46.7
29	99 54 8.4	105 56 35.4	3 35 45.4	3 10 21.7	27.26	22 59.9	10 35.4
30	112 1 13.7	118 8 16.2	2 42 38.6	2 12 51.5	28.26	23 49.2	11 24.6
31	124 17 54.1	130 30 17.2	1 41 17.9	S. 1 8 17.2	29.26	* *	12 13.7
32	136 45 33.7	143 3 50.9	S. 0 34 10.9	N. 0 0 38.0	0.68	0 38.1	13 2.4

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10m.	Declination.	Var. in 10m.	Hour.	Right Ascension.	Var. in 10m.	Declination.	Var. in 10m.
TUESDAY 1.					THURSDAY 3.				
	h m s	s				h m s	s		
0	6 5 20.08	21.063	N.19 22' 0.9	13.49	0	7 47 19.75	21.311	N.18 40' 37.8	30.84
1	6 7 26.50	21.076	19 23 19.1	12.58	1	7 49 27.61	21.308	18 37 30.0	31.76
2	6 9 32.99	21.088	19 24 31.9	11.68	2	7 51 35.45	21.306	18 34 16.7	32.67
3	6 11 39.56	21.101	19 25 39.3	10.78	3	7 53 43.28	21.303	18 30 58.0	33.58
4	6 13 46.20	21.113	19 26 41.3	9.88	4	7 55 51.09	21.299	18 27 33.8	34.48
5	6 15 52.91	21.123	19 27 37.8	8.96	5	7 57 58.87	21.296	18 24 4.2	35.39
6	6 17 59.68	21.134	19 28 28.8	8.04	6	8 0 6.64	21.293	18 20 29.1	36.29
7	6 20 6.52	21.145	19 29 14.3	7.13	7	8 2 14.38	21.288	18 16 48.7	37.19
8	6 22 13.42	21.156	19 29 54.4	6.22	8	8 4 22.09	21.283	18 13 2.8	38.09
9	6 24 20.39	21.166	19 30 28.9	5.30	9	8 6 29.78	21.280	18 9 11.6	38.98
10	6 26 27.41	21.176	19 30 58.0	4.38	10	8 8 37.45	21.275	18 5 15.0	39.88
11	6 28 34.50	21.186	19 31 21.5	3.46	11	8 10 45.08	21.269	18 1 13.0	40.78
12	6 30 41.64	21.194	19 31 39.5	2.54	12	8 12 52.68	21.264	17 57 5.7	41.66
13	6 32 48.83	21.203	19 31 52.0	1.63	13	8 15 0.25	21.258	17 52 53.1	42.55
14	6 34 56.08	21.213	19 31 59.0	0.70	14	8 17 7.78	21.253	17 48 35.1	43.43
15	6 37 3.38	21.220	19 32 0.4	0.23	15	8 19 15.28	21.248	17 44 11.9	44.31
16	6 39 10.72	21.228	19 31 56.2	1.16	16	8 21 22.75	21.242	17 39 43.4	45.19
17	6 41 18.12	21.237	19 31 46.5	2.08	17	8 23 30.18	21.235	17 35 9.6	46.06
18	6 43 25.56	21.243	19 31 31.2	3.01	18	8 25 37.57	21.228	17 30 30.7	46.93
19	6 45 33.04	21.250	19 31 10.4	3.94	19	8 27 44.92	21.222	17 25 46.5	47.80
20	6 47 40.56	21.257	19 30 43.9	4.88	20	8 29 52.23	21.215	17 20 57.1	48.67
21	6 49 48.12	21.263	19 30 11.9	5.80	21	8 31 59.50	21.208	17 16 2.5	49.53
22	6 51 55.71	21.269	19 29 34.3	6.73	22	8 34 6.73	21.201	17 11 2.7	50.39
23	6 54 3.35	21.275	N.19 28 51.2	7.66	23	8 36 13.91	21.193	N.17 5 57.8	51.23
WEDNESDAY 2.					FRIDAY 4.				
	h m s	s				h m s	s		
0	6 56 11.01	21.279	N.19 28 2.4	8.60	0	8 38 21.05	21.187	N.17 0' 47.9	52.08
1	6 58 18.70	21.285	19 27 8.0	9.53	1	8 40 28.15	21.179	16 55 32.8	52.94
2	7 0 26.43	21.290	19 26 8.1	10.45	2	8 42 35.20	21.171	16 50 12.6	53.78
3	7 2 34.18	21.294	19 25 2.6	11.39	3	8 44 42.20	21.163	16 44 47.4	54.62
4	7 4 41.96	21.298	19 23 51.4	12.33	4	8 46 49.16	21.155	16 39 17.2	55.45
5	7 6 49.76	21.302	19 22 34.7	13.25	5	8 48 56.06	21.147	16 33 42.0	56.28
6	7 8 57.58	21.305	19 21 12.4	14.19	6	8 51 2.92	21.139	16 28 1.8	57.12
7	7 11 5.42	21.308	19 19 44.4	15.13	7	8 53 9.73	21.131	16 22 16.6	57.94
8	7 13 13.27	21.311	19 18 10.9	16.05	8	8 55 16.49	21.123	16 16 26.5	58.76
9	7 15 21.15	21.313	19 16 31.8	16.98	9	8 57 23.20	21.114	16 10 31.5	59.58
10	7 17 29.03	21.315	19 14 47.1	17.91	10	8 59 29.86	21.106	16 4 31.6	60.39
11	7 19 36.93	21.317	19 12 56.9	18.84	11	9 1 36.47	21.098	15 58 26.8	61.20
12	7 21 44.83	21.318	19 11 1.0	19.78	12	9 3 43.03	21.088	15 52 17.2	62.00
13	7 23 52.75	21.320	19 8 59.6	20.70	13	9 5 49.53	21.079	15 46 2.8	62.80
14	7 26 0.67	21.320	19 6 52.6	21.62	14	9 7 55.98	21.071	15 39 43.6	63.59
15	7 28 8.59	21.320	19 4 40.1	22.55	15	9 10 2.38	21.063	15 33 19.7	64.38
16	7 30 16.51	21.321	19 2 22.0	23.48	16	9 12 8.73	21.053	15 26 51.0	65.18
17	7 32 24.44	21.321	18 59 58.3	24.41	17	9 14 15.02	21.044	15 20 17.6	65.95
18	7 34 32.36	21.320	18 57 29.1	25.33	18	9 16 21.26	21.036	15 13 39.6	66.73
19	7 36 40.28	21.319	18 54 54.3	26.26	19	9 18 27.45	21.027	15 6 56.9	67.50
20	7 38 48.19	21.318	18 52 14.0	27.18	20	9 20 33.58	21.018	15 0 9.6	68.27
21	7 40 56.09	21.317	18 49 28.2	28.09	21	9 22 39.66	21.009	14 53 17.7	69.02
22	7 43 3.99	21.316	18 46 36.9	29.01	22	9 24 45.69	21.001	14 46 21.3	69.78
23	7 45 11.88	21.313	18 43 40.1	29.93	23	9 26 51.67	20.992	14 39 20.3	70.54
24	7 47 19.75	21.311	N.18 40 37.8	30.84	24	9 28 57.59	20.983	N.14 32 14.8	71.28

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10m.	Declination.	Var. in 10m.	Hour.	Right Ascension.	Var. in 10m.	Declination.	Var. in 10m.
SATURDAY 5.					MONDAY 7.				
	h m s	s	N. 10' 14"	'		h m s	s	N. 0' 36"	'
0	9 28 57.59	20.983	14 32 14.8	71.28	0	11 8 54.36	20.746	7 34 36.8	100.38
1	9 31 3.46	20.973	14 25 4.9	72.02	1	11 10 58.84	20.747	7 24 33.2	100.83
2	9 33 9.27	20.965	14 17 50.6	72.76	2	11 13 3.32	20.748	7 14 26.8	101.28
3	9 35 15.04	20.957	14 10 31.8	73.49	3	11 15 7.82	20.752	7 4 17.8	101.72
4	9 37 20.75	20.948	14 3 8.7	74.22	4	11 17 12.34	20.755	6 54 6.2	102.14
5	9 39 26.41	20.939	13 55 41.2	74.91	5	11 19 16.88	20.758	6 43 52.1	102.56
6	9 41 32.02	20.932	13 48 9.4	75.66	6	11 21 21.44	20.762	6 33 35.5	102.97
7	9 43 37.59	20.923	13 40 33.3	76.38	7	11 23 26.02	20.765	6 23 16.5	103.38
8	9 45 43.10	20.914	13 32 52.9	77.08	8	11 25 30.62	20.770	6 12 55.0	103.78
9	9 47 48.56	20.906	13 25 8.4	77.77	9	11 27 35.26	20.776	6 2 31.1	104.17
10	9 49 53.97	20.898	13 17 19.7	78.47	10	11 29 39.93	20.780	5 52 5.0	104.55
11	9 51 59.34	20.891	13 9 26.8	79.16	11	11 31 44.62	20.786	5 41 36.5	104.93
12	9 54 4.66	20.883	13 1 29.8	79.84	12	11 33 49.36	20.793	5 31 5.9	105.29
13	9 56 9.93	20.874	12 53 28.7	80.52	13	11 35 54.14	20.799	5 20 33.0	105.66
14	9 58 15.15	20.867	12 45 23.6	81.19	14	11 37 58.95	20.806	5 9 58.0	106.01
15	10 0 20.33	20.860	12 37 14.4	81.86	15	11 40 3.81	20.814	4 59 20.9	106.36
16	10 2 25.47	20.853	12 29 1.3	82.52	16	11 42 8.72	20.822	4 48 41.7	106.69
17	10 4 30.57	20.846	12 20 44.2	83.18	17	11 44 13.67	20.830	4 38 0.6	107.02
18	10 6 35.62	20.838	12 12 23.2	83.83	18	11 46 18.68	20.839	4 27 17.5	107.34
19	10 8 40.63	20.832	12 3 58.3	84.47	19	11 48 23.74	20.848	4 16 32.5	107.66
20	10 10 45.60	20.825	11 55 29.6	85.10	20	11 50 28.86	20.858	4 5 45.6	107.97
21	10 12 50.53	20.819	11 46 57.1	85.73	21	11 52 34.04	20.868	3 54 56.9	108.27
22	10 14 55.43	20.813	11 38 20.8	86.36	22	11 54 39.28	20.879	3 44 6.4	108.55
23	10 17 0.29	20.807	N. 11 29 40.8	86.98	23	11 56 44.59	20.891	N. 3 33 14.3	108.83
SUNDAY 6.					TUESDAY 8.				
	h m s	s	N. 11 20 57.0	'		h m s	s	N. 3 22 20.4	'
0	10 19 5.11	20.801	11 20 57.0	87.60	0	11 58 49.97	20.903	3 11 24.9	109.12
1	10 21 9.90	20.796	11 12 9.6	88.20	1	12 0 55.42	20.914	3 0 27.8	109.38
2	10 23 14.66	20.791	11 3 18.6	88.79	2	12 3 0.94	20.928	2 49 29.3	109.63
3	10 25 19.39	20.785	10 54 24.1	89.39	3	12 5 6.55	20.941	2 38 29.2	109.88
4	10 27 24.08	20.780	10 45 25.9	89.99	4	12 7 12.23	20.954	2 27 27.7	110.13
5	10 29 28.75	20.776	10 36 24.2	90.57	5	12 9 18.00	20.968	2 16 24.9	110.36
6	10 31 33.39	20.772	10 27 19.1	91.13	6	12 11 23.85	20.983	2 5 20.7	110.58
7	10 33 38.01	20.768	10 18 10.6	91.71	7	12 13 29.79	20.998	1 54 15.3	111.01
8	10 35 42.60	20.763	10 8 58.6	92.28	8	12 15 35.83	21.014	1 43 8.6	111.21
9	10 37 47.17	20.761	9 59 43.3	92.83	9	12 17 41.96	21.030	1 32 0.8	111.40
10	10 39 51.73	20.758	9 50 24.6	93.38	10	12 19 48.19	21.048	1 20 51.8	111.58
11	10 41 56.26	20.754	9 41 2.7	93.93	11	12 21 54.53	21.064	1 9 41.8	111.75
12	10 44 0.78	20.752	9 31 37.5	94.47	12	12 24 0.96	21.082	0 58 30.8	111.92
13	10 46 5.28	20.749	9 22 9.1	94.99	13	12 26 7.51	21.100	0 47 18.8	112.08
14	10 48 9.77	20.747	9 12 37.6	95.52	14	12 28 14.16	21.118	0 36 5.9	112.22
15	10 50 14.24	20.745	9 3 2.9	96.04	15	12 30 20.93	21.138	0 24 52.2	112.36
16	10 52 18.71	20.744	8 53 25.1	96.55	16	12 32 27.82	21.158	0 13 37.6	112.49
17	10 54 23.17	20.743	8 43 44.3	97.05	17	12 34 34.83	21.178	N. 0 2 22.3	112.60
18	10 56 27.63	20.743	8 34 0.5	97.55	18	12 36 41.96	21.199	S. 0 8 53.6	112.71
19	10 58 32.08	20.742	8 24 13.7	98.04	19	12 38 49.22	21.221	0 20 10.2	112.82
20	11 0 36.53	20.742	8 14 24.0	98.53	20	12 40 56.61	21.243	0 31 27.4	112.91
21	11 2 40.98	20.742	8 4 31.4	99.00	21	12 43 4.14	21.266	0 42 45.1	112.98
22	11 4 45.43	20.743	7 54 36.0	99.47	22	12 45 11.80	21.288	0 54 3.2	113.06
23	11 6 49.89	20.744	7 44 37.8	99.93	23	12 47 19.60	21.312	S. 1 5 21.8	113.13
24	11 8 54.36	20.746	N. 7 34 36.8	100.38	24	12 49 27.54	21.336		

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	
WEDNESDAY 9.					FRIDAY 11.					
	h m s	s	S.	° ' "		h m s	s	S.	° ' "	
0	12 49 27.54	21.336	S.	1 5 21.8	113.13	0	14 35 37.87	23.087	S. 9 55 40.6	103.45
1	12 51 35.63	21.361		1 16 40.7	113.18	1	14 37 56.53	23.133	10 5 59.8	102.95
2	12 53 43.87	21.386		1 27 59.9	113.23	2	14 40 15.47	23.180	10 16 16.0	102.43
3	12 55 52.26	21.412		1 39 19.4	113.26	3	14 42 34.69	23.228	10 26 29.0	101.91
4	12 58 0.81	21.438		1 50 39.0	113.28	4	14 44 54.20	23.276	10 36 38.9	101.38
5	13 0 9.51	21.464		2 1 58.7	113.28	5	14 47 14.00	23.324	10 46 45.6	100.83
6	13 2 18.38	21.492		2 13 18.4	113.29	6	14 49 34.09	23.373	10 56 48.9	100.26
7	13 4 27.41	21.519		2 24 38.2	113.29	7	14 51 54.47	23.421	11 6 48.7	99.68
8	13 6 36.61	21.548		2 35 57.9	113.28	8	14 54 15.14	23.469	11 16 45.1	99.10
9	13 8 45.98	21.577		2 47 17.5	113.25	9	14 56 36.10	23.518	11 26 37.9	98.49
10	13 10 55.53	21.607		2 58 36.9	113.21	10	14 58 57.36	23.568	11 36 27.0	97.87
11	13 13 5.26	21.637		3 9 56.0	113.16	11	15 1 18.92	23.618	11 46 12.3	97.23
12	13 15 15.17	21.667		3 21 14.8	113.11	12	15 3 40.77	23.667	11 55 53.8	96.60
13	13 17 25.26	21.698		3 32 33.3	113.04	13	15 6 2.92	23.717	12 5 31.5	95.94
14	13 19 35.54	21.729		3 43 51.3	112.96	14	15 8 25.37	23.767	12 15 5.1	95.26
15	13 21 46.01	21.761		3 55 8.8	112.87	15	15 10 48.12	23.817	12 24 34.6	94.58
16	13 23 56.67	21.793		4 6 25.7	112.78	16	15 13 11.17	23.867	12 34 0.0	93.88
17	13 26 7.53	21.827		4 17 42.1	112.67	17	15 15 34.52	23.917	12 43 21.1	93.17
18	13 28 18.59	21.860		4 28 57.7	112.53	18	15 17 58.17	23.968	12 52 38.0	92.44
19	13 30 29.85	21.894		4 40 12.5	112.41	19	15 20 22.13	24.018	13 1 50.4	91.69
20	13 32 41.32	21.929		4 51 26.6	112.27	20	15 22 46.38	24.068	13 10 58.3	90.93
21	13 34 53.00	21.964		5 2 39.7	112.11	21	15 25 10.94	24.118	13 20 1.6	90.17
22	13 37 4.89	22.000		5 13 51.9	111.94	22	15 27 35.80	24.168	13 29 0.3	89.38
23	13 39 17.00	22.037	S.	5 25 3.0	111.76	23	15 30 0.96	24.218	S. 13 37 54.2	88.58
THURSDAY 10.					SATURDAY 12.					
	h m s	s	S.	° ' "		h m s	s	S.	° ' "	
0	13 41 29.33	22.073	S.	5 36 13.0	111.58	0	15 32 26.42	24.269	S. 13 46 43.3	87.78
1	13 43 41.87	22.109		5 47 21.9	111.38	1	15 34 52.19	24.320	13 55 27.5	86.95
2	13 45 54.64	22.148		5 58 29.6	111.17	2	15 37 18.26	24.369	14 4 6.7	86.10
3	13 48 7.64	22.186		6 9 35.9	110.94	3	15 39 44.62	24.419	14 12 40.7	85.25
4	13 50 20.87	22.224		6 20 40.9	110.71	4	15 42 11.29	24.470	14 21 9.7	84.39
5	13 52 34.33	22.263		6 31 44.4	110.46	5	15 44 38.26	24.519	14 29 33.4	83.51
6	13 54 48.03	22.303		6 42 46.4	110.20	6	15 47 5.52	24.569	14 37 51.8	82.62
7	13 57 1.96	22.343		6 53 46.8	109.93	7	15 49 33.09	24.619	14 46 4.8	81.71
8	13 59 16.14	22.383		7 4 45.6	109.66	8	15 52 0.95	24.668	14 54 12.3	80.78
9	14 1 30.56	22.424		7 15 42.7	109.36	9	15 54 29.10	24.717	15 2 14.2	79.85
10	14 3 45.23	22.465		7 26 37.9	109.05	10	15 56 57.55	24.767	15 10 10.5	78.91
11	14 6 0.14	22.507		7 37 31.3	108.73	11	15 59 26.30	24.815	15 18 1.1	77.94
12	14 8 15.31	22.550		7 48 22.7	108.40	12	16 1 55.33	24.863	15 25 45.8	76.96
13	14 10 30.74	22.593		7 59 12.1	108.06	13	16 4 24.65	24.911	15 33 24.6	75.98
14	14 12 46.42	22.635		8 9 59.4	107.71	14	16 6 54.26	24.959	15 40 57.5	74.98
15	14 15 2.36	22.678		8 20 44.6	107.34	15	16 9 24.16	25.007	15 48 24.4	73.97
16	14 17 18.56	22.722		8 31 27.5	106.95	16	16 11 54.34	25.053	15 55 45.1	72.93
17	14 19 35.02	22.767		8 42 8.0	106.56	17	16 14 24.80	25.100	16 2 59.6	71.89
18	14 21 51.76	22.812		8 52 46.2	106.16	18	16 16 55.54	25.147	16 10 7.8	70.84
19	14 24 8.76	22.856		9 3 21.9	105.74	19	16 19 26.56	25.193	16 17 9.7	69.78
20	14 26 26.03	22.901		9 13 55.1	105.31	20	16 21 57.85	25.238	16 24 5.1	68.69
21	14 28 43.57	22.947		9 24 25.6	104.86	21	16 24 29.41	25.282	16 30 54.0	67.60
22	14 31 1.39	22.993		9 34 53.4	104.40	22	16 27 1.23	25.326	16 37 36.3	66.50
23	14 33 19.49	23.040		9 45 18.4	103.93	23	16 29 33.32	25.371	16 44 12.0	65.38
24	14 35 37.87	23.087	S.	9 55 40.6	103.45	24	16 32 5.68	25.414	S. 16 50 40.9	64.25

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
SUNDAY 13.					TUESDAY 15.				
	h m s	s	S. 16° 50' 40".	64".		h m s	s	S. 19° 30' 46".	0".
0	16 32 5.68	25.414	16 57 3.0	63.11	0	18 37 31.94	26.459	19 30 42.0	1.50
1	16 34 38.29	25.456	17 9 26.5	60.80	1	18 40 10.68	26.453	19 30 28.7	2.94
2	16 37 11.15	25.498	17 15 27.8	59.63	2	18 42 49.38	26.447	19 30 6.7	4.38
3	16 39 44.27	25.540	17 21 22.0	58.43	3	18 45 28.04	26.438	19 29 36.2	5.81
4	16 42 17.63	25.581	17 27 9.0	57.23	4	18 48 6.64	26.429	19 28 57.0	7.24
5	16 44 51.24	25.622	17 32 48.8	56.03	5	18 50 45.19	26.419	19 28 9.3	8.67
6	16 47 25.09	25.661	17 38 21.3	54.81	6	18 53 23.67	26.407	19 27 13.0	10.10
7	16 49 59.17	25.699	17 43 46.5	53.58	7	18 56 2.07	26.393	19 26 8.1	11.53
8	16 52 33.48	25.738	17 49 4.2	52.33	8	18 58 40.39	26.379	19 24 54.6	12.95
9	16 55 8.02	25.775	17 54 14.5	51.08	9	19 1 18.62	26.363	19 23 32.7	14.36
10	16 57 42.78	25.812	17 59 17.2	49.82	10	19 3 56.75	26.347	19 22 2.3	15.78
11	17 0 17.76	25.848	18 4 12.3	48.55	11	19 6 34.78	26.329	19 20 23.4	17.18
12	17 2 52.95	25.883	18 8 59.8	47.28	12	19 9 12.70	26.310	19 18 36.1	18.59
13	17 5 28.35	25.917	18 13 39.6	45.98	13	19 11 50.50	26.289	19 16 40.3	19.99
14	17 8 3.95	25.950	18 18 11.6	44.68	14	19 14 28.17	26.268	19 14 36.2	21.38
15	17 10 39.75	25.983	18 22 35.8	43.38	15	19 17 5.71	26.245	19 12 23.7	22.77
16	17 13 15.74	26.014	18 26 52.1	42.06	16	19 19 43.11	26.222	19 10 3.3	24.15
17	17 15 51.92	26.045	18 31 0.5	40.73	17	19 22 20.37	26.198	19 7 33.9	25.53
18	17 18 28.28	26.074	18 35 0.9	39.40	18	19 24 57.48	26.171	19 4 56.6	26.90
19	17 21 4.81	26.103	18 38 53.3	38.06	19	19 27 34.42	26.143	18 59 17.5	29.62
20	17 23 41.52	26.132	18 42 37.6	36.71	20	19 30 11.20	26.116	18 56 15.7	30.97
21	17 26 18.39	26.158	18 46 13.8	35.36	21	19 32 47.81	26.086	18 53 5.9	32.30
22	17 28 55.41	26.183			22	19 35 24.23	26.056		
23	17 31 32.59	26.208			23	19 38 0.48	26.025		
MONDAY 14.					WEDNESDAY 16.				
	h m s	s	S. 18° 49' 41".	33".		h m s	s	S. 18° 49' 48".	33".
0	17 34 9.91	26.232	18 53 1.7	32.62	0	19 40 36.53	25.992	18 46 22.3	34.96
1	17 36 47.37	26.255	18 59 16.7	29.87	1	19 43 12.38	25.958	18 42 48.6	36.28
2	17 39 24.97	26.277	19 2 11.7	28.48	2	19 45 48.03	25.924	18 39 7.0	37.58
3	17 42 2.69	26.297	19 4 58.4	27.08	3	19 48 23.47	25.889	18 35 17.6	38.88
4	17 44 40.53	26.317	19 7 36.7	25.68	4	19 50 58.70	25.853	18 31 20.4	40.18
5	17 47 18.49	26.336	19 10 6.5	24.28	5	19 53 33.70	25.815	18 27 15.5	41.45
6	17 49 56.56	26.353	19 12 28.0	22.88	6	19 56 8.48	25.778	18 23 3.0	42.72
7	17 52 34.72	26.368	19 14 41.0	21.46	7	19 58 43.03	25.738	18 18 42.9	43.98
8	17 55 12.98	26.383	19 16 45.5	20.03	8	20 1 17.34	25.698	18 14 15.2	45.23
9	17 57 51.32	26.397	19 18 41.4	18.61	9	20 3 51.41	25.658	18 9 40.1	46.47
10	18 0 29.74	26.410	19 20 28.8	17.19	10	20 6 25.23	25.616	18 4 57.6	47.70
11	18 3 8.24	26.421	19 22 7.7	15.77	11	20 8 58.80	25.573	17 55 10.6	50.13
12	18 5 46.79	26.431	19 23 38.0	14.33	12	20 11 32.11	25.530	17 50 6.2	51.33
13	18 8 25.41	26.441	19 24 59.7	12.90	13	20 14 5.16	25.486	17 44 54.7	52.51
14	18 11 4.08	26.448	19 26 12.8	11.47	14	20 16 37.94	25.441	17 39 36.1	53.68
15	18 13 42.79	26.455	19 27 17.3	10.03	15	20 19 10.45	25.395	17 34 10.5	54.84
16	18 16 21.54	26.460	19 28 13.1	8.58	16	20 21 42.68	25.349	17 28 38.0	55.99
17	18 19 0.31	26.464	19 29 0.3	7.15	17	20 24 14.64	25.303	17 22 58.6	57.13
18	18 21 39.11	26.468	19 29 38.9	5.71	18	20 26 46.31	25.255	17 17 12.4	58.27
19	18 24 17.93	26.470	19 30 8.8	4.27	19	20 29 17.70	25.207	17 11 19.4	59.38
20	18 26 56.75	26.470	19 30 30.1	2.83	20	20 31 48.79	25.158	16 59 13.7	61.57
21	18 29 35.57	26.469	19 30 42.7	1.38	21	20 34 19.59	25.108	16 53 1.1	62.64
22	18 32 14.38	26.467			22	20 36 50.08	25.058		
23	18 34 53.17	26.463			23	20 39 20.28	25.008		
24	18 37 31.94	26.459			24	20 41 50.17	24.956		

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
THURSDAY 17.					SATURDAY 19.				
	h m s	s	S. ° ' "	"		h m s	s	S. ° ' "	"
0	20 41 50.17	24.956	S. 10 53 1.1	62.64	0	22 35 13.38	22.277	S. 10 13 35.7	98.60
1	20 44 19.75	24.904	16 46 42.0	63.71	1	22 37 26.88	22.224	10 34 2.8	99.03
2	20 46 49.02	24.853	16 40 16.6	64.76	2	22 39 40.07	22.172	9 53 47.3	99.45
3	20 49 17.98	24.800	16 33 44.9	65.80	3	22 41 52.94	22.119	9 43 49.4	99.84
4	20 51 46.62	24.747	16 27 7.0	66.83	4	22 44 5.50	22.067	9 33 49.2	100.23
5	20 54 14.94	24.693	16 20 23.0	67.83	5	22 46 17.74	22.015	9 23 46.6	100.61
6	20 56 42.93	24.638	16 13 33.0	68.83	6	22 48 29.68	21.963	9 13 41.9	100.98
7	20 59 10.60	24.584	16 6 37.0	69.83	7	22 50 41.30	21.913	9 3 34.9	101.33
8	21 1 37.94	24.530	15 59 35.1	70.80	8	22 52 52.63	21.863	8 53 25.9	101.67
9	21 4 4.96	24.476	15 52 27.4	71.76	9	22 55 3.65	21.812	8 43 14.9	102.00
10	21 6 31.65	24.420	15 45 14.0	72.70	10	22 57 14.37	21.762	8 33 1.9	102.33
11	21 8 58.00	24.364	15 37 55.0	73.63	11	22 59 24.79	21.713	8 22 47.0	102.63
12	21 11 24.02	24.308	15 30 30.4	74.55	12	23 1 34.92	21.664	8 12 30.4	102.92
13	21 13 49.70	24.252	15 23 0.4	75.46	13	23 3 44.76	21.615	8 2 12.0	103.21
14	21 16 15.04	24.196	15 15 24.9	76.35	14	23 5 54.30	21.567	7 51 51.9	103.48
15	21 18 40.05	24.139	15 7 44.2	77.23	15	23 8 3.56	21.520	7 41 30.2	103.75
16	21 21 4.71	24.083	14 59 58.2	78.09	16	23 10 12.54	21.473	7 31 6.9	104.00
17	21 23 29.04	24.026	14 52 7.1	78.94	17	23 12 21.23	21.426	7 20 42.2	104.23
18	21 25 53.02	23.968	14 44 10.9	79.78	18	23 14 29.65	21.380	7 10 16.1	104.46
19	21 28 16.66	23.912	14 36 9.7	80.61	19	23 16 37.79	21.334	6 59 48.7	104.68
20	21 30 39.96	23.854	14 28 3.6	81.42	20	23 18 45.66	21.289	6 49 19.9	104.90
21	21 33 2.91	23.797	14 19 52.7	82.22	21	23 20 53.26	21.244	6 38 49.9	105.09
22	21 35 25.52	23.739	14 11 37.0	83.00	22	23 23 0.59	21.199	6 28 18.8	105.28
23	21 37 47.78	23.682	S. 14 3 16.7	83.76	23	23 25 7.65	21.156	S. 6 17 46.6	105.46
FRIDAY 18.					SUNDAY 20.				
0	21 40 9.70	23.624	S. 13 54 51.9	84.51	0	23 27 14.46	21.113	S. 6 7 13.3	105.63
1	21 42 31.27	23.567	13 46 22.6	85.25	1	23 29 21.01	21.070	5 56 39.1	105.78
2	21 44 52.50	23.510	13 37 48.9	85.98	2	23 31 27.30	21.028	5 46 3.9	105.93
3	21 47 13.39	23.452	13 29 10.8	86.70	3	23 33 33.34	20.986	5 35 27.9	106.07
4	21 49 33.92	23.394	13 20 28.5	87.40	4	23 35 39.13	20.944	5 24 51.1	106.19
5	21 51 54.12	23.338	13 11 42.0	88.09	5	23 37 44.67	20.903	5 14 13.6	106.31
6	21 54 13.97	23.279	13 2 51.4	88.76	6	23 39 49.97	20.863	5 3 35.4	106.42
7	21 56 33.47	23.222	12 53 56.9	89.42	7	23 41 55.03	20.824	4 52 56.6	106.52
8	21 58 52.63	23.165	12 44 58.4	90.07	8	23 43 59.86	20.785	4 42 17.2	106.61
9	22 1 11.45	23.108	12 35 56.1	90.69	9	23 46 4.45	20.747	4 31 37.3	106.69
10	22 3 29.93	23.052	12 26 50.1	91.31	10	23 48 8.82	20.709	4 20 56.9	106.77
11	22 5 48.07	22.995	12 17 40.4	91.92	11	23 50 12.96	20.671	4 10 16.1	106.83
12	22 8 5.87	22.938	12 8 27.1	92.52	12	23 52 16.87	20.633	3 59 35.0	106.88
13	22 10 23.32	22.881	11 59 10.2	93.09	13	23 54 20.56	20.598	3 48 53.6	106.93
14	22 12 40.44	22.826	11 49 50.0	93.65	14	23 56 24.04	20.562	3 38 11.9	106.96
15	22 14 57.23	22.770	11 40 26.4	94.21	15	23 58 27.30	20.526	3 27 30.1	106.98
16	22 17 13.68	22.713	11 30 59.5	94.75	16	0 0 30.35	20.492	3 16 48.1	107.00
17	22 19 29.79	22.658	11 21 29.4	95.28	17	0 2 33.20	20.458	3 6 6.1	107.01
18	22 21 45.57	22.603	11 11 56.2	95.79	18	0 4 35.84	20.423	2 55 24.0	107.02
19	22 24 1.03	22.548	11 2 19.9	96.29	19	0 6 38.28	20.390	2 44 41.9	107.01
20	22 26 16.15	22.493	10 52 40.7	96.78	20	0 8 40.52	20.358	2 33 59.9	106.99
21	22 28 30.94	22.438	10 42 58.6	97.25	21	0 10 42.57	20.326	2 23 18.0	106.97
22	22 30 45.41	22.385	10 33 13.7	97.72	22	0 12 44.43	20.294	2 12 36.3	106.93
23	22 32 59.56	22.331	10 23 26.0	98.17	23	0 14 46.10	20.263	2 1 54.8	106.89
24	22 35 13.38	22.277	S. 10 13 35.7	98.60	24	0 16 47.59	20.233	S. 1 51 13.6	106.85

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10m.	Declination.	Var. in 10m.	Hour.	Right Ascension.	Var. in 10m.	Declination.	Var. in 10m.
MONDAY 21.					WEDNESDAY 23.				
	h m s	s	S. ° ' "	" "		h m s	s	N. ° ' "	" "
0	0 16 47.59	20 233	S. 1 51 13.6	106.85	0	1 51 27.58	19.418	N. 6 22 46.7	96.57
1	0 18 48.90	20.203	1 40 32.6	106.79	1	1 53 24.07	19.413	6 32 25.1	96.22
2	0 20 50.03	20.173	1 29 52.1	106.73	2	1 55 20.53	19.408	6 42 1.3	95.85
3	0 22 50.98	20.145	1 19 11.9	106.66	3	1 57 16.97	19.405	6 51 35.3	95.48
4	0 24 51.77	20.118	1 8 32.2	106.58	4	1 59 13.39	19.403	7 1 7.0	95.10
5	0 26 52.39	20.089	0 57 52.9	106.49	5	2 1 9.80	19.400	7 10 36.5	94.73
6	0 28 52.84	20.063	0 47 14.3	106.39	6	2 3 6.19	19.398	7 20 3.7	94.34
7	0 30 53.14	20.036	0 36 36.2	106.30	7	2 5 2.57	19.397	7 29 28.6	93.95
8	0 32 53.27	20.010	0 25 58.7	106.19	8	2 6 58.95	19.396	7 38 51.1	93.55
9	0 34 53.26	19.985	0 15 21.9	106.08	9	2 8 55.32	19.394	7 48 11.2	93.15
10	0 36 53.09	19.960	S. 0 4 45.8	105.95	10	2 10 51.68	19.394	7 57 28.9	92.75
11	0 38 52.78	19.936	N. 0 5 49.5	105.83	11	2 12 48.05	19.395	8 6 44.2	92.34
12	0 40 52.32	19.912	0 16 24.1	105.69	12	2 14 44.42	19.396	8 15 57.0	91.93
13	0 42 51.72	19.889	0 26 57.8	105.54	13	2 16 40.80	19.397	8 25 7.3	91.51
14	0 44 50.99	19.867	0 37 30.6	105.38	14	2 18 37.18	19.398	8 34 15.1	91.08
15	0 46 50.12	19.844	0 48 2.4	105.23	15	2 20 33.58	19.401	8 43 20.3	90.65
16	0 48 49.12	19.823	0 58 33.4	105.08	16	2 22 29.99	19.403	8 52 22.9	90.22
17	0 50 47.99	19.802	1 9 3.3	104.89	17	2 24 26.41	19.405	9 1 22.9	89.78
18	0 52 46.74	19.782	1 19 32.1	104.72	18	2 26 22.85	19.409	9 10 20.2	89.33
19	0 54 45.37	19.762	1 29 59.9	104.53	19	2 28 19.32	19.413	9 19 14.9	88.88
20	0 56 43.88	19.743	1 40 26.5	104.34	20	2 30 15.80	19.417	9 28 6.8	88.43
21	0 58 42.28	19.724	1 50 52.0	104.15	21	2 32 12.32	19.422	9 36 56.0	87.97
22	1 0 40.57	19.706	2 1 16.3	103.95	22	2 34 8.86	19.426	9 45 42.4	87.51
23	1 2 38.75	19.688	N. 2 11 39.4	103.73	23	2 36 5.43	19.431	N. 9 54 26.1	87.04
TUESDAY 22.					THURSDAY 24.				
	h m s	s	N. ° ' "	" "		h m s	s	N. ° ' "	" "
0	1 4 36.82	19.671	N. 2 22 1.1	103.52	0	2 38 2.03	19.437	N. 10 3 6.9	86.57
1	1 6 34.80	19.654	2 32 21.6	103.30	1	2 39 58.67	19.443	10 11 44.9	86.09
2	1 8 32.67	19.638	2 42 40.7	103.07	2	2 41 55.35	19.450	10 20 20.0	85.60
3	1 10 30.46	19.623	2 52 58.4	102.82	3	2 43 52.07	19.457	10 28 52.1	85.12
4	1 12 28.15	19.608	3 3 14.7	102.59	4	2 45 48.83	19.463	10 37 21.4	84.63
5	1 14 25.75	19.593	3 13 29.5	102.34	5	2 47 45.63	19.471	10 45 47.7	84.13
6	1 16 23.26	19.579	3 23 42.8	102.09	6	2 49 42.48	19.479	10 54 10.9	83.63
7	1 18 20.70	19.566	3 33 54.6	101.83	7	2 51 39.38	19.488	11 2 31.2	83.13
8	1 20 18.05	19.553	3 44 4.8	101.57	8	2 53 36.33	19.496	11 10 48.4	82.61
9	1 22 15.33	19.541	3 54 13.4	101.29	9	2 55 33.33	19.505	11 19 2.5	82.09
10	1 24 12.54	19.529	4 4 20.3	101.02	10	2 57 30.39	19.515	11 27 13.5	81.58
11	1 26 9.68	19.518	4 14 25.6	100.74	11	2 59 27.51	19.524	11 35 21.4	81.05
12	1 28 6.76	19.508	4 24 29.2	100.46	12	3 1 24.68	19.534	11 43 26.1	80.52
13	1 30 3.77	19.497	4 34 31.1	100.16	13	3 3 21.92	19.545	11 51 27.6	79.98
14	1 32 0.72	19.487	4 44 31.1	99.86	14	3 5 19.22	19.556	11 59 25.9	79.44
15	1 33 57.61	19.478	4 54 29.4	99.56	15	3 7 16.59	19.567	12 7 20.9	78.89
16	1 35 54.45	19.469	5 4 25.8	99.24	16	3 9 14.02	19.578	12 15 12.6	78.35
17	1 37 51.24	19.461	5 14 20.3	98.93	17	3 11 11.52	19.589	12 23 1.1	77.80
18	1 39 47.98	19.453	5 24 12.9	98.61	18	3 13 9.09	19.602	12 30 46.2	77.23
19	1 41 44.67	19.446	5 34 3.6	98.28	19	3 15 6.74	19.614	12 38 27.9	76.67
20	1 43 41.33	19.439	5 43 52.3	97.95	20	3 17 4.46	19.626	12 46 6.2	76.11
21	1 45 37.94	19.433	5 53 39.0	97.62	21	3 19 2.25	19.639	12 53 41.2	75.53
22	1 47 34.52	19.427	6 3 23.7	97.28	22	3 21 0.13	19.653	13 1 12.6	74.95
23	1 49 31.06	19.422	6 13 6.3	96.92	23	3 22 58.08	19.666	13 8 40.6	74.38
24	1 51 27.58	19.418	N. 6 22 46.7	96.57	24	3 24 56.12	19.679	N. 13 16 5.1	73.79

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10m.	Declination.	Var. in 10m.	Hour.	Right Ascension.	Var. in 10m.	Declination.	Var. in 10m.
FRIDAY 25.					SUNDAY 27.				
	h m s	s	N. 13 16 5	1		h m s	s	N. 17 54 7	5
0	3 24 56.12	19.679	13 16 5.1	73.79	0	5 1 21.14	20.540	17 54 7.5	40.37
1	3 26 54.23	19.693	13 23 26.1	73.20	1	5 3 24.44	20.559	17 58 7.3	39.57
2	3 28 52.44	19.708	13 30 43.5	72.60	2	5 5 27.85	20.578	18 2 2.3	38.77
3	3 30 50.73	19.722	13 37 57.3	72.00	3	5 7 31.38	20.598	18 5 52.5	37.96
4	3 32 49.10	19.737	13 45 7.5	71.39	4	5 9 35.02	20.618	18 9 37.8	37.14
5	3 34 47.57	19.753	13 52 14.0	70.78	5	5 11 38.79	20.637	18 13 18.2	36.32
6	3 36 46.13	19.768	13 59 16.9	70.18	6	5 13 42.66	20.655	18 16 53.6	35.50
7	3 38 44.78	19.783	14 6 16.1	69.56	7	5 15 46.65	20.675	18 20 24.2	34.68
8	3 40 43.52	19.798	14 13 11.6	68.93	8	5 17 50.76	20.694	18 23 49.8	33.85
9	3 42 42.36	19.814	14 20 3.3	68.31	9	5 19 54.98	20.713	18 27 10.4	33.02
10	3 44 41.29	19.830	14 26 51.3	67.68	10	5 21 59.31	20.731	18 30 26.0	32.18
11	3 46 40.32	19.847	14 33 35.4	67.03	11	5 24 3.75	20.749	18 33 36.6	31.35
12	3 48 39.45	19.863	14 40 15.7	66.40	12	5 26 8.30	20.768	18 36 42.2	30.51
13	3 50 38.68	19.880	14 46 52.2	65.75	13	5 28 12.97	20.787	18 39 42.7	29.66
14	3 52 38.01	19.897	14 53 24.7	65.10	14	5 30 17.74	20.804	18 42 38.1	28.81
15	3 54 37.44	19.914	14 59 53.4	64.45	15	5 32 22.62	20.823	18 45 28.4	27.96
16	3 56 36.98	19.932	15 6 18.1	63.78	16	5 34 27.62	20.842	18 48 13.6	27.10
17	3 58 36.62	19.949	15 12 38.8	63.13	17	5 36 32.72	20.858	18 50 53.6	26.24
18	4 0 36.37	19.967	15 18 55.6	62.46	18	5 38 37.92	20.876	18 53 28.5	25.38
19	4 2 36.22	19.984	15 25 8.3	61.78	19	5 40 43.23	20.894	18 55 58.2	24.52
20	4 4 36.18	20.003	15 31 17.0	61.11	20	5 42 48.65	20.912	18 58 22.7	23.65
21	4 6 36.25	20.020	15 37 21.6	60.42	21	5 44 54.17	20.928	19 0 42.0	22.78
22	4 8 36.42	20.038	15 43 22.0	59.73	22	5 46 59.79	20.945	19 2 56.0	21.89
23	4 10 36.71	20.058	N. 15 49 18.4	59.05	23	5 49 5.51	20.962	N. 19 5 4.7	21.02
SATURDAY 26.					MONDAY 28.				
0	4 12 37.11	20.076	N. 15 55 10.6	58.35	0	5 51 11.33	20.978	N. 19 7 8.2	20.14
1	4 14 37.62	20.094	16 0 58.6	57.65	1	5 53 17.25	20.995	19 9 6.4	19.26
2	4 16 38.24	20.113	16 6 42.4	56.94	2	5 55 23.27	21.012	19 10 59.3	18.37
3	4 18 38.97	20.131	16 12 21.9	56.23	3	5 57 29.39	21.028	19 12 46.8	17.48
4	4 20 39.81	20.150	16 17 57.2	55.53	4	5 59 35.60	21.043	19 14 29.0	16.58
5	4 22 40.77	20.170	16 23 28.2	54.81	5	6 1 41.91	21.059	19 16 5.8	15.69
6	4 24 41.85	20.189	16 28 54.9	54.08	6	6 3 48.31	21.073	19 17 37.3	14.79
7	4 26 43.04	20.208	16 34 17.2	53.36	7	6 5 54.79	21.088	19 19 3.3	13.89
8	4 28 44.35	20.228	16 39 35.2	52.63	8	6 8 1.37	21.104	19 20 24.0	12.99
9	4 30 45.77	20.247	16 44 48.7	51.89	9	6 10 8.04	21.118	19 21 39.2	12.08
10	4 32 47.31	20.266	16 49 57.9	51.16	10	6 12 14.79	21.133	19 22 48.9	11.18
11	4 34 48.96	20.285	16 55 2.6	50.41	11	6 14 21.64	21.148	19 23 53.3	10.28
12	4 36 50.73	20.305	17 0 2.8	49.66	12	6 16 28.56	21.160	19 24 52.2	9.35
13	4 38 52.62	20.324	17 4 58.5	48.92	13	6 18 35.56	21.174	19 25 45.5	8.43
14	4 40 54.62	20.343	17 9 49.8	48.16	14	6 20 42.65	21.188	19 26 33.4	7.53
15	4 42 56.74	20.363	17 14 36.4	47.39	15	6 22 49.82	21.201	19 27 15.8	6.61
16	4 44 58.98	20.383	17 19 18.5	46.63	16	6 24 57.06	21.213	19 27 52.7	5.69
17	4 47 1.34	20.403	17 23 56.0	45.86	17	6 27 4.38	21.227	19 28 24.1	4.77
18	4 49 3.82	20.423	17 28 28.8	45.08	18	6 29 11.78	21.238	19 28 49.9	3.83
19	4 51 6.41	20.442	17 32 57.0	44.32	19	6 31 19.24	21.250	19 29 10.1	2.91
20	4 53 9.12	20.462	17 37 20.6	43.53	20	6 33 26.78	21.263	19 29 24.8	1.99
21	4 55 11.95	20.482	17 41 39.4	42.75	21	6 35 34.39	21.273	19 29 34.0	1.06
22	4 57 14.90	20.501	17 45 53.6	41.96	22	6 37 42.06	21.284	19 29 37.5	0.13
23	4 59 17.96	20.520	17 50 2.9	41.16	23	6 39 49.80	21.295	19 29 35.5	0.81
24	5 1 21.14	20.540	N. 17 54 7.5	40.37	24	6 41 57.60	21.306	N. 19 29 27.8	1.74

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in rom.	Declination.	Var. in rom.	Hour.	Right Ascension.	Var. in rom.	Declination.	Var. in rom.
TUESDAY 29.					THURSDAY 31.				
	h m s	s	N. 19 29 27.8	1.74		h m s	s	N. 17 33 0.2	46.47
0	6 41 57.60	21.306	19 29 14.6	2.68	0	8 24 50.55	21.444	17 28 18.7	47.37
1	6 44 5.47	21.316	19 28 55.7	3.62	1	8 26 59.20	21.440	17 23 31.8	48.26
2	6 46 13.39	21.326	19 28 31.2	4.55	2	8 29 7.83	21.436	17 18 39.6	49.14
3	6 48 21.38	21.336	19 27 25.4	5.48	3	8 31 16.43	21.431	17 13 42.1	50.03
4	6 50 29.42	21.344	19 26 44.0	6.43	4	8 33 25.00	21.426	17 8 39.2	50.92
5	6 52 37.51	21.353	19 25 57.0	7.37	5	8 35 33.54	21.421	17 3 31.1	51.78
6	6 54 45.66	21.363	19 25 4.3	8.31	6	8 37 42.05	21.415	16 58 17.8	52.66
7	6 56 53.86	21.371	19 24 6.0	9.25	7	8 39 50.53	21.411	16 52 59.2	53.53
8	6 59 2.11	21.379	19 23 2.0	10.19	8	8 41 58.98	21.405	16 47 35.4	54.39
9	7 1 10.41	21.387	19 21 52.3	11.14	9	8 44 7.39	21.398	16 42 6.5	55.26
10	7 3 18.75	21.393	19 20 37.0	12.08	10	8 46 15.76	21.393	16 36 32.3	56.12
11	7 5 27.13	21.401	19 17 49.5	13.02	11	8 48 24.10	21.387	16 30 53.1	56.97
12	7 7 35.56	21.408	19 16 17.2	13.96	12	8 50 32.40	21.380	16 19 19.2	57.83
13	7 9 44.02	21.414	19 15 4.6	14.91	13	8 52 40.66	21.373	16 13 24.6	58.68
14	7 11 52.53	21.421	19 14 39.2	15.86	14	8 54 48.88	21.367	16 7 25.1	59.51
15	7 14 1.07	21.426	19 12 55.6	16.80	15	8 56 57.06	21.359	16 1 20.5	60.34
16	7 16 9.64	21.431	19 11 6.3	17.74	16	8 59 5.19	21.353	15 55 10.9	61.18
17	7 18 18.24	21.437	19 9 11.4	18.68	17	9 1 13.29	21.346	15 48 56.3	62.00
18	7 20 26.88	21.442	19 7 10.8	19.63	18	9 3 21.34	21.338	15 42 36.8	62.84
19	7 22 35.54	21.446	19 5 4.6	20.57	19	9 5 29.34	21.330	15 36 12.4	63.66
20	7 24 44.23	21.450	19 2 52.7	21.51	20	9 7 37.30	21.323	15 29 43.1	64.48
21	7 26 52.94	21.454	N. 19 0 35.1	22.46	21	9 9 45.21	21.315	15 23 9.0	65.28
22	7 29 1.68	21.458		23.40	22	9 11 53.08	21.308		66.09
23	7 31 10.44	21.461			23	9 14 0.91	21.300		
WEDNESDAY 30.					FRIDAY, AUG. 1.				
	h m s	s	N. 18 58 11.9	24.34		h m s	s	N. 15 16 30.0	66.90
0	7 33 19.21	21.463	18 55 43.0	25.28	0	9 16 8.68	21.291		
1	7 35 28.00	21.466	18 50 28.4	26.22					
2	7 37 36.80	21.468	18 47 42.7	27.15					
3	7 39 45.62	21.471	18 44 51.3	28.09					
4	7 41 54.45	21.473	18 41 54.3	29.03					
5	7 44 3.29	21.473	18 38 51.7	29.97					
6	7 46 12.13	21.474	18 35 43.5	30.90					
7	7 48 20.98	21.476	18 32 29.8	31.83					
8	7 50 29.84	21.476	18 29 10.4	32.76					
9	7 52 38.69	21.476	18 25 45.5	33.62					
10	7 54 47.55	21.476	18 22 15.0	34.54					
11	7 56 56.40	21.475	18 18 39.0	35.47					
12	7 59 5.25	21.474	18 14 57.4	36.39					
13	8 1 14.09	21.473	18 11 10.3	37.23					
14	8 3 22.93	21.473	18 7 17.7	38.05					
15	8 5 31.76	21.471	18 3 19.6	38.88					
16	8 7 40.58	21.468	17 59 16.0	39.78					
17	8 9 49.38	21.466	17 55 7.0	40.68					
18	8 11 58.17	21.464	17 46 32.5	41.58					
19	8 14 6.95	21.462	17 37 36.3	42.47					
20	8 16 15.71	21.458	17 33 0.2	43.37					
21	8 18 24.45	21.455		44.28					
22	8 20 33.17	21.452		45.18					
23	8 22 41.87	21.448		46.09					
24	8 24 50.55	21.444							

PHASES OF THE MOON.

	h m
July 1	● New Moon - - - 17 35.0
9	☾ First Quarter - - - 9 46.0
15	○ Full Moon - - - 23 49.0
23	☾ Last Quarter - - - 4 35.8
31	● New Moon - - - 7 41.9

	h
July 14	☾ Perigee - - - - - 10.1
26	☾ Apogee - - - - - 12.5

AT APPARENT NOON.

		THE SUN'S				Sidereal Time of the Semi- diameter passing the Meridian.*	Equation of Time, to be added to		Var. in 1 hour.
Date.		Apparent Right Ascension.	Var. in 1 hour.	Apparent Declination.	Var. in 1 hour.		subtracted from Apparent Time.		
		h m s	s	° ' "	"	m s	m s	s	
Frid.	1	8 45 26.74	9.712	N. 18 1 52.9	37.74	1 6.58	6 9.87	0.144	
Sat.	2	8 49 19.53	9.687	17 46 38.2	38.47	1 6.49	6 6.12	0.169	
Sun.	3	8 53 11.71	9.661	17 31 6.1	39 19	1 6.41	6 1.75	0.195	
Mon.	4	8 57 3.27	9.636	17 15 17.0	39.89	1 6.32	5 56.77	0.220	
Tues.	5	9 0 54.22	9.610	16 59 11.2	40.59	1 6.23	5 51.18	0.246	
Wed.	6	9 4 44.55	9.584	16 42 48.8	41.27	1 6.15	5 44.97	0.271	
Thur.	7	9 8 34.26	9.559	16 26 10.4	41.93	1 6.06	5 38.15	0.297	
Frid.	8	9 12 23.36	9.533	16 9 16.1	42.59	1 5.98	5 30.72	0.322	
Sat.	9	9 16 11.86	9.508	15 52 6.3	43.23	1 5.89	5 22.68	0.347	
Sun.	10	9 19 59.76	9.483	15 34 41.3	43.85	1 5.81	5 14.04	0.372	
Mon.	11	9 23 47.06	9.459	15 17 1.4	44.47	1 5.73	5 4.82	0.396	
Tues.	12	9 27 33.78	9.435	14 59 6.9	45.07	1 5.65	4 55.02	0.420	
Wed.	13	9 31 19.93	9.411	14 40 58.1	45.66	1 5.57	4 44.65	0.444	
Thur.	14	9 35 5.53	9.389	14 22 35.2	46.24	1 5.49	4 33.72	0.467	
Frid.	15	9 38 50.58	9.366	14 3 58.7	46.80	1 5.41	4 22.25	0.489	
Sat.	16	9 42 35.11	9.345	13 45 8.7	47.35	1 5.33	4 10.25	0.511	
Sun.	17	9 46 19.12	9.324	13 26 5.7	47.89	1 5.26	3 57.74	0.531	
Mon.	18	9 50 2.64	9.303	13 6 49.8	48.42	1 5.18	3 44.74	0.552	
Tues.	19	9 53 45.66	9.283	12 47 21.3	48.94	1 5.11	3 31.25	0.572	
Wed.	20	9 57 28.22	9.264	12 27 40.7	49.44	1 5.04	3 17.29	0.591	
Thur.	21	10 1 10.31	9.245	12 7 48.2	49.93	1 4.97	3 2.87	0.610	
Frid.	22	10 4 51.96	9.226	11 47 44.1	50.41	1 4.90	2 48.01	0.628	
Sat.	23	10 8 33.18	9.209	11 27 28.7	50.87	1 4.84	2 32.71	0.646	
Sun.	24	10 12 13.97	9.191	11 7 2.4	51.32	1 4.78	2 17.00	0.663	
Mon.	25	10 15 54.36	9.175	10 46 25.4	51.76	1 4.71	2 0.88	0.680	
Tues.	26	10 19 34.36	9.159	10 25 38.1	52.18	1 4.65	1 44.36	0.696	
Wed.	27	10 23 13.97	9.143	10 4 40.9	52.59	1 4.60	1 27.47	0.711	
Thur.	28	10 26 53.21	9.128	9 43 34.0	52.98	1 4.54	1 10.21	0.727	
Frid.	29	10 30 32.10	9.113	9 22 17.7	53.36	1 4.49	0 52.59	0.741	
Sat.	30	10 34 10.64	9.099	9 0 52.5	53.73	1 4.44	0 34.63	0.755	
Sun.	31	10 37 48.85	9.085	8 39 18.6	54.09	1 4.39	0 16.33	0.769	
Mon.	32	10 41 26.74	9.072	N. 8 17 36.4	54.43	1 4.34	0 2.28	0.782	

* Mean Time of the Semidiameter passing may be found by subtracting 0^s.18 from the *Sidereal Time*.

AT MEAN NOON.

		THE SUN'S			Equation of Time, to be added to	Sidereal Time.
		Apparent Right Ascension.	Apparent Declination.	Semi- diameter.*	subtracted from Apparent Time.	
Date.		h m s	N. 18 1 56.8	15 47.08	m s	h m s
Frid.	1	8 45 25.74	17 46 42.1	15 47.21	6 9.89	8 39 15.86
Sat.	2	8 49 18.55	17 31 10.1	15 47.35	6 6.13	8 43 12.41
Sun.	3	8 53 10.74			6 1.77	8 47 8.97
Mon.	4	8 57 2.32	17 15 21.0	15 47.48	5 56.79	8 51 5.52
Tues.	5	9 0 53.28	16 59 15.1	15 47.63	5 51.20	8 55 2.08
Wed.	6	9 4 43.63	16 42 52.8	15 47.77	5 45.00	8 58 58.63
Thur.	7	9 8 33.36	16 26 14.3	15 47.92	5 38.18	9 2 55.19
Frid.	8	9 12 22.49	16 9 20.0	15 48.08	5 30.75	9 6 51.74
Sat.	9	9 16 11.01	15 52 10.2	15 48.24	5 22.71	9 10 48.30
Sun.	10	9 19 58.93	15 34 45.2	15 48.40	5 14.08	9 14 44.85
Mon.	11	9 23 46.26	15 17 5.2	15 48.57	5 4.85	9 18 41.40
Tues.	12	9 27 33.01	14 59 10.6	15 48.73	4 55.05	9 22 37.96
Wed.	13	9 31 19.19	14 41 1.7	15 48.90	4 44.68	9 26 34.51
Thur.	14	9 35 4.82	14 22 38.8	15 49.08	4 33.75	9 30 31.07
Frid.	15	9 38 49.90	14 4 2.1	15 49.25	4 22.28	9 34 27.62
Sat.	16	9 42 34.46	13 45 12.0	15 49.43	4 10.29	9 38 24.17
Sun.	17	9 46 18.51	13 26 8.8	15 49.61	3 57.78	9 42 20.73
Mon.	18	9 50 2.06	13 6 52.8	15 49.79	3 44.77	9 46 17.28
Tues.	19	9 53 45.12	12 47 24.2	15 49.97	3 31.28	9 50 13.84
Wed.	20	9 57 27.71	12 27 43.4	15 50.16	3 17.32	9 54 10.39
Thur.	21	10 1 9.84	12 7 50.7	15 50.35	3 2.90	9 58 6.94
Frid.	22	10 4 51.53	11 47 46.4	15 50.54	2 48.04	10 2 3.50
Sat.	23	10 8 32.79	11 27 30.9	15 50.74	2 32.74	10 6 0.05
Sun.	24	10 12 13.62	11 7 4.3	15 50.94	2 17.02	10 9 56.60
Mon.	25	10 15 54.05	10 46 27.2	15 51.14	2 0.90	10 13 53.15
Tues.	26	10 19 34.09	10 25 39.7	15 51.35	1 44.38	10 17 49.71
Wed.	27	10 23 13.75	10 4 42.2	15 51.56	1 27.49	10 21 46.26
Thur.	28	10 26 53.03	9 43 35.0	15 51.77	1 10.22	10 25 42.81
Frid.	29	10 30 31.96	9 22 18.5	15 51.99	0 52.60	10 29 39.37
Sat.	30	10 34 10.55	9 0 53.0	15 52.21	0 34.63	10 33 35.92
Sun.	31	10 37 48.81	8 39 18.8	15 52.44	0 16.34	10 37 32.47
Mon.	32	10 41 26.74	N. 8 17 36.3	15 52.67	0 2.28	10 41 29.02

* The Semidiameter for *Apparent* Noon may be assumed the same as that for *Mean* Noon.

MEAN TIME.

Day.	THE SUN'S <i>Apparent</i>		Logarithm of the Radius Vector of the Earth.	Transit of the First Point of Aries.	THE MOON'S			
	Longitude.	Latitude.			Semidiameter.		Horizontal Parallax.	
	Noon.	Noon.			Noon.	Midnight.	Noon.	Midnight.
				h m s				
1	128° 55' 28.5	S. 0° 17'	0.0064158	15 18 13.30	15° 10' 65"	15° 14' 56"	55° 42' 22"	55° 56' 56"
2	129 52 55.0	S. 0° 04'	0.0063574	15 14 17.39	15 18.56	15 22.63	56 11.24	56 26.17
3	130 50 22.3	N. 0° 09'	0.0062967	15 10 21.48	15 26.75	15 30.90	56 41.29	56 56.52
4	131 47 50.5	0° 21'	0.0062337	15 6 25.57	15 35.07	15 39.25	57 11.84	57 27.20
5	132 45 19.4	0° 30'	0.0061685	15 2 29.67	15 43.44	15 47.60	57 42.55	57 57.84
6	133 42 49.1	0° 38'	0.0061011	14 58 33.76	15 51.73	15 55.80	58 12.99	58 27.91
7	134 40 19.5	0° 43'	0.0060318	14 54 37.85	15 59.77	16 3.59	58 42.48	58 56.52
8	135 37 50.7	0° 45'	0.0059606	14 50 41.94	16 7.22	16 10.59	59 9.83	59 22.19
9	136 35 22.7	0° 43'	0.0058877	14 46 46.03	16 13.62	16 16.23	59 33.31	59 42.90
10	137 32 55.5	0° 37'	0.0058134	14 42 50.12	16 18.34	16 19.87	59 50.66	59 56.26
11	138 30 29.2	0° 29'	0.0057376	14 38 54.21	16 20.73	16 20.85	59 59.41	59 59.88
12	139 28 3.8	0° 19'	0.0056607	14 34 58.31	16 20.19	16 18.71	59 57.45	59 52.01
13	140 25 39.5	N. 0° 06'	0.0055826	14 31 2.40	16 16.40	16 13.28	59 13.53	59 32.06
14	141 23 16.3	S. 0° 08'	0.0055036	14 27 6.49	16 9.39	16 4.80	59 17.78	59 0.94
15	142 20 54.3	0° 22'	0.0054236	14 23 10.58	15 59.60	15 53.91	58 41.87	58 20.98
16	143 18 33.7	0° 36'	0.0053427	14 19 14.68	15 47.84	15 41.53	57 58.72	57 35.57
17	144 16 14.5	0° 48'	0.0052607	14 15 18.77	15 35.12	15 28.71	57 12.01	56 48.51
18	145 13 56.8	0° 59'	0.0051777	14 11 22.86	15 22.45	15 16.45	56 25.54	56 3.51
19	146 11 40.6	0° 68'	0.0050936	14 7 26.95	15 10.81	15 5.61	55 42.80	55 23.72
20	147 9 26.1	0° 74'	0.0050083	14 3 31.04	15 0.04	14 56.85	55 6.57	54 51.56
21	148 7 13.3	0° 76'	0.0049217	13 59 35.14	14 53.39	14 50.61	54 38.88	54 28.66
22	149 5 2.2	0° 76'	0.0048337	13 55 39.23	14 48.52	14 47.13	54 20.99	54 15.91
23	150 2 52.7	0° 74'	0.0047443	13 51 43.32	14 46.45	14 46.47	54 13.41	54 13.48
24	151 0 45.0	0° 69'	0.0046531	13 47 47.42	14 47.17	14 48.52	54 16.04	54 21.00
25	151 58 39.1	0° 61'	0.0045608	13 43 51.51	14 50.49	14 53.02	54 28.21	54 37.51
26	152 56 34.9	0° 51'	0.0044666	13 39 55.60	14 56.07	14 59.58	54 48.71	55 1.59
27	153 54 32.4	0° 40'	0.0043707	13 35 59.69	15 3.48	15 7.70	55 15.89	55 31.38
28	154 52 31.7	0° 27'	0.0042731	13 32 3.79	15 12.16	15 16.80	55 47.77	56 4.78
29	155 50 32.6	0° 14'	0.0041736	13 28 7.88	15 21.52	15 26.27	56 22.12	56 39.53
30	156 48 35.2	S. 0° 01'	0.0040723	13 24 11.97	15 30.95	15 35.52	56 56.73	57 13.49
31	157 46 39.5	N. 0° 11'	0.0039692	13 20 16.07	15 39.91	15 44.06	57 29.59	57 44.84
32	158 44 45.3	N. 0° 22'	0.0038643	13 16 20.16	15 47.95	15 51.54	57 59.11	58 12.29

MEAN TIME.

Day.	THE MOON'S						
	Longitude.		Latitude.		Age.	Meridian Passage.	
	Noon.	Midnight.	Noon.	Midnight.	Noon.	Upper.	Lower.
	[°] ['] ["]	[°] ['] ["]	[°] ['] ["]	[°] ['] ["]	d	h m	h m
1	136 45 33.7	143 3 50.9	S. 0 34 10.9	N. 0 0 38.0	0.68	0 38.1	13 2.4
2	149 25 15.4	155 49 52.7	N. 0 35 44.5	1 10 42.3	1.68	1 26.6	13 50.6
3	162 17 48.2	168 49 7.1	1 45 4.3	2 18 22.6	2.68	2 14.6	14 38.5
4	175 23 53.5	182 2 11.8	2 50 8.8	3 19 54.9	3.68	3 2.4	15 26.1
5	188 44 5.5	195 29 37.4	3 47 13.3	4 11 37.1	4.68	3 50.5	16 14.9
6	202 18 49.2	209 11 40.4	4 32 41.1	4 50 2.0	5.68	4 39.7	17 4.9
7	216 8 8.5	223 8 8.6	5 3 18.7	5 12 12.9	6.68	5 30.6	17 56.9
8	230 11 32.1	237 18 6.4	5 16 30.2	5 16 0.1	7.68	6 23.8	18 51.5
9	244 27 34.7	251 39 35.3	5 10 36.7	5 0 19.7	8.68	7 19.8	19 48.8
10	258 53 41.8	266 9 23.3	4 45 14.2	4 25 31.6	9.68	8 18.3	20 48.2
11	273 26 4.4	280 43 6.1	4 1 29.4	3 33 31.1	10.68	9 18.3	21 48.4
12	287 59 46.9	295 15 23.5	3 2 6.1	2 27 48.4	11.68	10 18.3	22 47.9
13	302 29 12.5	309 40 31.5	1 51 16.0	N. 1 13 9.2	12.68	11 16.9	23 45.3
14	316 48 40.4	323 53 3.0	N. 0 34 9.6	S. 0 5 1.4	13.68	12 12.9	* *
15	330 53 7.6	337 48 27.9	S. 0 43 44.2	1 21 21.9	14.68	13 5.8	0 39.8
16	344 38 44.1	351 23 42.5	1 57 21.2	2 31 13.2	15.68	13 55.8	1 31.1
17	358 3 16.2	4 37 24.6	3 2 33.3	3 31 1.7	16.68	14 43.4	2 19.8
18	11 6 13.3	17 29 53.6	3 56 23.2	4 18 26.0	17.68	15 29.2	3 6.5
19	23 48 41.9	30 2 58.7	4 37 2.3	4 52 7.2	18.68	16 14.2	3 51.8
20	36 13 8.9	42 19 40.4	5 3 38.4	5 11 35.6	19.68	16 58.8	4 36.5
21	48 23 3.4	54 23 50.2	5 16 0.0	5 16 54.3	20.68	17 43.8	5 21.2
22	60 22 34.7	66 19 51.2	5 14 22.0	5 8 27.3	21.68	18 29.6	6 6.6
23	72 16 14.5	78 12 19.4	4 59 15.5	4 46 52.3	22.68	19 16.3	6 52.8
24	84 8 40.0	90 5 49.4	4 31 24.4	4 12 59.1	23.68	20 4.2	7 40.1
25	96 4 19.3	102 4 39.9	3 51 44.9	3 27 51.6	24.68	20 52.8	8 28.4
26	108 7 18.9	114 12 41.6	3 1 30.3	2 32 54.1	25.68	21 42.0	9 17.4
27	120 21 11.0	126 33 6.2	2 2 17.8	1 29 58.6	26.68	22 31.4	10 6.7
28	132 48 43.5	139 8 15.2	S. 0 56 15.8	S. 0 21 31.3	27.68	23 20.6	10 56.0
29	145 31 50.0	151 59 32.6	N. 0 13 50.7	N. 0 49 23.9	28.68	* *	11 45.0
30	158 31 23.8	165 7 20.7	1 24 39.9	1 59 9.0	0.14	0 9.5	12 33.8
31	171 47 16.4	178 31 1.1	2 32 20.4	3 3 42.8	1.14	0 58.2	13 22.6
32	185 18 21.4	192 9 2.0	N. 3 32 45.6	N. 3 58 59.2	2.14	1 47.2	14 11.8

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in rom.	Declination.	Var. in rom.	Hour.	Right Ascension.	Var. in rom.	Declination.	Var. in rom.
FRIDAY 1.					SUNDAY 3.				
	h m s	s	N. 15 16 30 0	66 90		h m s	s	N. 8 34 3 4	98 30
0	9 16 8.68	21.291	15 16 30.0	66.90	0	10 57 24.89	20.938	8 34 12.1	98.78
1	9 18 16.40	21.283	15 9 46.2	67.69	1	10 59 30.50	20.934	8 14 18.0	99.25
2	9 20 24.08	21.276	15 2 57.7	68.47	2	11 1 36.10	20.931	8 4 21.1	99.73
3	9 22 31.71	21.267	14 56 4.5	69.27	3	11 3 41.67	20.928	7 54 21.3	100.19
4	9 24 39.28	21.258	14 49 6.5	70.05	4	11 5 47.23	20.924	7 44 18.8	100.64
5	9 26 46.81	21.251	14 42 3.9	70.82	5	11 7 52.76	20.922	7 34 13.6	101.08
6	9 28 54.29	21.242	14 34 56.7	71.59	6	11 9 58.29	20.920	7 24 5.8	101.53
7	9 31 1.71	21.233	14 27 44.8	72.36	7	11 12 3.80	20.918	7 13 55.3	101.96
8	9 33 9.09	21.225	14 20 28.4	73.12	8	11 14 9.30	20.915	7 3 42.3	102.37
9	9 35 16.41	21.216	14 13 7.4	73.87	9	11 16 14.78	20.913	6 53 26.9	102.78
10	9 37 23.68	21.208	14 5 42.0	74.62	10	11 18 20.26	20.913	6 43 8.9	103.19
11	9 39 30.90	21.199	13 58 12.0	75.37	11	11 20 25.74	20.913	6 32 48.6	103.58
12	9 41 38.07	21.191	13 50 37.6	76.10	12	11 22 31.21	20.911	6 22 25.9	103.98
13	9 43 45.19	21.182	13 42 58.8	76.83	13	11 24 36.67	20.911	6 12 0.8	104.37
14	9 45 52.25	21.173	13 35 15.7	77.55	14	11 26 42.14	20.911	6 1 33.5	104.73
15	9 47 59.27	21.165	13 27 28.2	78.28	15	11 28 47.60	20.911	5 51 4.1	105.09
16	9 50 6.23	21.156	13 19 36.4	78.98	16	11 30 53.07	20.913	5 40 32.4	105.46
17	9 52 13.14	21.148	13 11 40.4	79.69	17	11 32 58.55	20.913	5 29 58.6	105.80
18	9 54 20.01	21.140	13 3 40.1	80.39	18	11 35 4.03	20.914	5 19 22.8	106.13
19	9 56 26.82	21.131	12 55 35.7	81.08	19	11 37 9.52	20.916	5 8 45.0	106.47
20	9 58 33.58	21.123	12 47 27.1	81.78	20	11 39 15.02	20.918	4 58 5.2	106.79
21	10 0 40.29	21.114	12 39 14.4	82.46	21	11 41 20.54	20.922	4 47 23.5	107.10
22	10 2 46.95	21.106	12 30 57.6	83.14	22	11 43 26.08	20.924	4 36 40.0	107.41
23	10 4 53.56	21.098	N. 12 22 36.7	83.81	23	11 45 31.63	20.927		
SATURDAY 2.					MONDAY 4.				
0	10 7 0.12	21.089	N. 12 14 11.9	84.47	0	11 47 37.20	20.931	N. 4 25 54.6	107.71
1	10 9 6.63	21.082	12 5 43.1	85.13	1	11 49 42.80	20.935	4 15 7.5	107.99
2	10 11 13.10	21.074	11 57 10.4	85.78	2	11 51 48.42	20.939	4 4 18.7	108.27
3	10 13 19.52	21.066	11 48 33.8	86.42	3	11 53 54.07	20.944	3 53 28.3	108.54
4	10 15 25.89	21.058	11 39 53.4	87.05	4	11 55 59.75	20.950	3 42 36.2	108.81
5	10 17 32.21	21.050	11 31 9.2	87.68	5	11 58 5.47	20.955	3 31 42.6	109.06
6	10 19 38.49	21.043	11 22 21.2	88.31	6	12 0 11.21	20.960	3 20 47.5	109.30
7	10 21 44.73	21.036	11 13 29.5	88.93	7	12 2 16.99	20.968	3 9 51.0	109.53
8	10 23 50.92	21.028	11 4 34.1	89.53	8	12 4 22.82	20.975	2 58 53.1	109.77
9	10 25 57.07	21.022	10 55 35.1	90.13	9	12 6 28.69	20.982	2 47 53.8	109.98
10	10 28 3.18	21.014	10 46 32.5	90.73	10	12 8 34.60	20.989	2 36 53.3	110.19
11	10 30 9.24	21.008	10 37 26.4	91.32	11	12 10 40.56	20.998	2 25 51.5	110.39
12	10 32 15.27	21.002	10 28 16.7	91.90	12	12 12 46.57	21.006	2 14 48.6	110.58
13	10 34 21.26	20.995	10 19 3.6	92.47	13	12 14 52.63	21.014	2 3 44.5	110.77
14	10 36 27.21	20.988	10 9 47.1	93.03	14	12 16 58.74	21.024	1 52 39.4	110.93
15	10 38 33.12	20.983	10 0 27.2	93.59	15	12 19 4.92	21.034	1 41 33.3	111.10
16	10 40 39.00	20.977	9 51 4.0	94.15	16	12 21 11.15	21.044	1 30 26.2	111.26
17	10 42 44.84	20.971	9 41 37.4	94.69	17	12 23 17.45	21.055	1 19 18.2	111.40
18	10 44 50.65	20.966	9 32 7.7	95.23	18	12 25 23.81	21.066	1 8 9.4	111.53
19	10 46 56.43	20.960	9 22 34.7	95.76	19	12 27 30.24	21.078	0 56 59.8	111.66
20	10 49 2.17	20.955	9 12 58.6	96.28	20	12 29 36.74	21.089	0 45 49.5	111.78
21	10 51 7.89	20.951	9 3 19.3	96.80	21	12 31 43.31	21.102	0 34 38.4	111.89
22	10 53 13.58	20.947	8 53 37.0	97.30	22	12 33 49.96	21.116	0 23 26.8	111.98
23	10 55 19.25	20.943	8 43 51.7	97.80	23	12 35 56.70	21.129	0 12 14.6	112.08
24	10 57 24.89	20.938	N. 8 34 3.4	98.30	24	12 38 3.51	21.142	N. 0 1 1.9	112.16

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
TUESDAY 5.					THURSDAY 7.				
	h m s	s	N. ° ' "	h m s		h m s	s	S. ° ' "	h m s
0	12 38 3.51	21.142	N. 0 1 1.9	112 16	0	14 22 1.51	22.353	S. 8 47 40.0	104.13
1	12 40 10.40	21.157	S. 0 10 11.3	112.23	1	14 24 15.73	22.388	8 58 3.5	103.69
2	12 42 17.39	21.172	0 21 24.9	112.29	2	14 26 30.16	22.424	9 8 24.3	103.24
3	12 44 24.46	21.187	0 32 38.8	112.34	3	14 28 44.82	22.461	9 18 42.4	102.79
4	12 46 31.63	21.203	0 43 53.0	112.38	4	14 30 59.69	22.497	9 28 57.8	102.33
5	12 48 38.89	21.218	0 55 7.4	112.41	5	14 33 14.78	22.535	9 39 10.4	101.85
6	12 50 46.25	21.235	1 6 21.9	112.43	6	14 35 30.11	22.573	9 49 20.0	101.36
7	12 52 53.71	21.253	1 17 36.6	112.45	7	14 37 45.66	22.610	9 59 26.7	100.86
8	12 55 1.28	21.270	1 28 51.3	112.45	8	14 40 1.43	22.648	10 9 30.3	100.34
9	12 57 8.95	21.288	1 40 6.0	112.45	9	14 42 17.44	22.687	10 19 30.8	99.83
10	12 59 16.73	21.307	1 51 20.7	112.43	10	14 44 33.67	22.725	10 29 28.2	99.29
11	13 1 24.63	21.326	2 2 35.2	112.40	11	14 46 50.14	22.765	10 39 22.3	98.74
12	13 3 32.64	21.345	2 13 49.5	112.37	12	14 49 6.85	22.805	10 49 13.1	98.18
13	13 5 40.77	21.365	2 25 3.6	112.33	13	14 51 23.80	22.844	10 59 0.5	97.62
14	13 7 49.02	21.385	2 36 17.4	112.28	14	14 53 40.98	22.883	11 8 44.5	97.03
15	13 9 57.39	21.407	2 47 30.9	112.21	15	14 55 58.40	22.924	11 18 24.9	96.43
16	13 12 5.90	21.428	2 58 43.9	112.13	16	14 58 16.07	22.965	11 28 1.7	95.83
17	13 14 14.53	21.449	3 9 56.4	112.03	17	15 0 33.98	23.005	11 37 34.8	95.21
18	13 16 23.29	21.472	3 21 8.3	111.94	18	15 2 52.13	23.045	11 47 4.2	94.58
19	13 18 32.19	21.495	3 32 19.7	111.84	19	15 5 10.52	23.087	11 56 29.8	93.94
20	13 20 41.23	21.518	3 43 30.4	111.72	20	15 7 29.17	23.128	12 5 51.5	93.28
21	13 22 50.40	21.541	3 54 40.3	111.59	21	15 9 48.06	23.169	12 15 9.2	92.63
22	13 24 59.72	21.566	4 5 49.5	111.46	22	15 12 7.20	23.212	12 24 23.0	91.95
23	13 27 9.19	21.591	S. 4 16 57.8	111.30	23	15 14 26.60	23.253	S. 12 33 32.6	91.26
WEDNESDAY 6.					FRIDAY 8.				
	h m s	s	N. ° ' "	h m s		h m s	s	S. ° ' "	h m s
0	13 29 18.81	21.616	S. 4 28 5.1	111.14	0	15 16 46.24	23.295	S. 12 42 38.1	90.56
1	13 31 28.58	21.642	4 39 11.5	110.98	1	15 19 6.14	23.338	12 51 39.3	89.84
2	13 33 38.51	21.668	4 50 16.9	110.80	2	15 21 26.29	23.379	13 0 36.2	89.12
3	13 35 48.59	21.693	5 1 21.1	110.61	3	15 23 46.69	23.422	13 9 28.7	88.38
4	13 37 58.83	21.721	5 12 24.2	110.41	4	15 26 7.35	23.465	13 18 16.8	87.64
5	13 40 9.24	21.748	5 23 26.0	110.19	5	15 28 28.27	23.507	13 27 0.4	86.88
6	13 42 19.81	21.776	5 34 26.5	109.98	6	15 30 49.43	23.549	13 35 39.3	86.10
7	13 44 30.55	21.805	5 45 25.7	109.74	7	15 33 10.86	23.593	13 44 13.6	85.33
8	13 46 41.47	21.833	5 56 23.4	109.50	8	15 35 32.54	23.635	13 52 43.2	84.53
9	13 48 52.55	21.863	6 7 19.7	109.25	9	15 37 54.48	23.678	14 1 8.0	83.72
10	13 51 3.82	21.893	6 18 14.4	108.98	10	15 40 16.67	23.720	14 9 27.8	82.90
11	13 53 15.26	21.923	6 29 7.4	108.70	11	15 42 39.12	23.763	14 17 42.8	82.08
12	13 55 26.89	21.953	6 39 58.8	108.43	12	15 45 1.82	23.806	14 25 52.7	81.23
13	13 57 38.70	21.983	6 50 48.5	108.13	13	15 47 24.79	23.849	14 33 57.5	80.37
14	13 59 50.69	22.015	7 1 36.3	107.82	14	15 49 48.01	23.891	14 41 57.2	79.51
15	14 2 2.88	22.048	7 12 22.3	107.50	15	15 52 11.48	23.933	14 49 51.6	78.63
16	14 4 15.26	22.079	7 23 6.3	107.16	16	15 54 35.21	23.977	14 57 40.7	77.74
17	14 6 27.83	22.112	7 33 48.2	106.82	17	15 56 59.20	24.019	15 5 24.5	76.81
18	14 8 40.60	22.145	7 44 28.1	106.48	18	15 59 23.44	24.061	15 13 2.9	75.92
19	14 10 53.57	22.179	7 55 5.9	106.11	19	16 1 47.93	24.103	15 20 35.7	75.00
20	14 13 6.75	22.213	8 5 41.4	105.73	20	16 4 12.67	24.145	15 28 2.9	74.08
21	14 15 20.12	22.247	8 16 14.6	105.34	21	16 6 37.67	24.188	15 35 24.6	73.15
22	14 17 33.71	22.282	8 26 45.5	104.95	22	16 9 2.92	24.229	15 42 40.5	72.17
23	14 19 47.50	22.317	8 37 14.0	104.54	23	16 11 28.42	24.270	15 49 50.6	71.20
24	14 22 1.51	22.353	S. 8 47 40.0	104.13	24	16 13 54.16	24.312	S. 15 56 54.9	70.22

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
SATURDAY 9.					MONDAY 11.				
	h m s	s	S. 15 56 54.9	70.22		h m s	s	S. 19 22 44.1	12.54
0	16 13 54.16	24.312	16 3 53.2	69.22	0	18 14 31.70	25.701	19 23 55.3	11.19
1	16 16 20.16	24.353	16 10 45.6	68.23	1	18 17 5.94	25.711	19 24 58.4	9.84
2	16 18 46.40	24.393	16 17 32.0	67.23	2	18 19 40.23	25.720	19 25 53.4	8.48
3	16 21 12.88	24.434	16 24 12.3	66.20	3	18 22 14.58	25.729	19 26 40.2	7.13
4	16 23 39.61	24.474	16 30 46.4	65.16	4	18 24 48.98	25.736	19 27 18.9	5.77
5	16 26 6.57	24.514	16 37 14.2	64.12	5	18 27 23.41	25.742	19 27 49.4	4.40
6	16 28 33.78	24.554	16 43 35.8	63.07	6	18 29 57.88	25.747	19 28 11.7	3.03
7	16 31 1.22	24.593	16 49 51.0	62.00	7	18 32 32.37	25.751	19 28 25.8	1.68
8	16 33 28.90	24.633	16 55 59.8	60.93	8	18 35 6.89	25.755	19 28 31.8	0.31
9	16 35 56.81	24.671	17 2 2.1	59.83	9	18 37 41.43	25.757	19 28 29.5	1.06
10	16 38 24.95	24.709	17 7 57.8	58.73	10	18 40 15.97	25.757	19 28 19.1	2.42
11	16 40 53.32	24.747	17 13 46.9	57.63	11	18 42 50.51	25.758	19 28 0.5	3.78
12	16 43 21.91	24.784	17 19 29.4	56.53	12	18 45 25.06	25.758	19 27 33.7	5.15
13	16 45 50.73	24.822	17 25 5.2	55.39	13	18 47 59.60	25.755	19 26 58.7	6.52
14	16 48 19.77	24.858	17 30 34.1	54.26	14	18 50 34.12	25.752	19 26 15.5	7.88
15	16 50 49.02	24.893	17 35 56.3	53.12	15	18 53 8.62	25.748	19 25 24.2	9.23
16	16 53 18.49	24.928	17 41 11.5	51.96	16	18 55 43.09	25.743	19 24 24.7	10.59
17	16 55 48.17	24.964	17 46 19.8	50.80	17	18 58 17.54	25.738	19 23 17.1	11.94
18	16 58 18.06	24.998	17 51 21.1	49.63	18	19 0 51.94	25.730	19 22 1.4	13.30
19	17 0 48.15	25.032	17 56 15.3	48.44	19	19 3 26.30	25.723	19 20 37.5	14.66
20	17 3 18.44	25.065	18 1 2.4	47.26	20	19 6 0.61	25.713	19 19 5.5	16.01
21	17 5 48.93	25.098	18 5 42.4	46.06	21	19 8 34.86	25.703	19 17 25.4	17.36
22	17 8 19.62	25.131	18 10 15.1	44.85	22	19 11 9.05	25.693	19 15 37.2	18.70
23	17 10 50.50	25.162			23	19 13 43.17	25.680		
SUNDAY 10.					TUESDAY 12.				
	h m s	s	S. 18 14 40.6	43.63		h m s	s	S. 19 13 41.0	20.03
0	17 13 21.56	25.193	18 18 58.7	42.41	0	19 16 17.21	25.667	19 11 36.8	21.37
1	17 15 52.81	25.223	18 23 9.5	41.18	1	19 18 51.17	25.653	19 9 24.6	22.71
2	17 18 24.24	25.253	18 27 12.9	39.95	2	19 21 25.04	25.638	19 7 4.3	24.03
3	17 20 55.84	25.282	18 31 8.9	38.70	3	19 23 58.82	25.622	19 4 36.2	25.35
4	17 23 27.62	25.310	18 38 38.2	37.44	4	19 26 32.50	25.605	19 2 0.1	26.68
5	17 25 59.56	25.337	18 42 11.6	36.19	5	19 29 6.08	25.588	18 59 16.0	27.99
6	17 28 31.66	25.363	18 45 37.3	34.93	6	19 31 39.56	25.570	18 56 24.2	29.29
7	17 31 3.92	25.389	18 48 55.3	33.64	7	19 34 12.92	25.549	18 53 24.5	30.60
8	17 33 36.33	25.414	18 52 5.7	32.37	8	19 36 46.15	25.528	18 50 17.0	31.90
9	17 36 8.89	25.439	18 55 8.3	31.08	9	19 39 19.26	25.507	18 47 1.7	33.18
10	17 38 41.60	25.463	18 58 3.2	29.76	10	19 41 52.23	25.483	18 43 38.8	34.47
11	17 41 14.44	25.485	19 0 50.2	28.49	11	19 44 25.06	25.460	18 40 8.1	35.75
12	17 43 47.42	25.507	19 6 0.7	27.18	12	19 46 57.75	25.436	18 36 29.8	37.02
13	17 46 20.52	25.528	19 8 24.2	25.88	13	19 49 30.29	25.411	18 32 43.9	38.28
14	17 48 53.75	25.548	19 10 39.7	24.57	14	19 52 2.68	25.385	18 28 50.4	39.54
15	17 51 27.10	25.568	19 12 47.2	23.25	15	19 54 34.91	25.358	18 24 49.4	40.78
16	17 54 0.57	25.587	19 14 46.8	21.92	16	19 57 6.98	25.331	18 20 41.0	42.03
17	17 56 34.14	25.603	19 16 38.4	20.59	17	19 59 38.88	25.302	18 16 25.1	43.27
18	17 59 7.81	25.620	19 18 21.9	19.27	18	20 2 10.60	25.273	18 12 1.8	44.49
19	18 1 41.58	25.637	19 19 57.4	17.93	19	20 4 42.15	25.243	18 7 31.2	45.70
20	18 4 15.45	25.652	19 21 24.8	16.58	20	20 7 13.51	25.212	18 2 53.4	46.91
21	18 6 49.40	25.664	19 22 44.1	15.24	21	20 9 44.69	25.180	17 58 8.3	48.12
22	18 9 23.42	25.678			22	20 12 15.67	25.148	17 53 16.0	49.31
23	18 11 57.53	25.690			23	20 14 46.46	25.114		
24	18 14 31.70	25.701			24	20 17 17.04	25.080		

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
WEDNESDAY 13.					FRIDAY 15.				
	h m s	s				h m s	s		
0	20 17 17.04	25.080	S. 17 48 16.6	50.48	0	22 12 47.91	22.938	S. 11 50 40.6	93.83
1	20 19 47.42	25.046	17 43 10.2	51.66	1	22 15 5.39	22.890	11 41 15.8	94.43
2	20 22 17.59	25.010	17 37 56.7	52.82	2	22 17 22.59	22.842	11 31 47.5	95.01
3	20 24 47.54	24.974	17 32 36.4	53.97	3	22 19 39.49	22.793	11 22 15.7	95.58
4	20 27 17.28	24.938	17 27 9.1	55.12	4	22 21 56.10	22.744	11 12 40.5	96.13
5	20 29 46.79	24.900	17 21 35.0	56.26	5	22 24 12.42	22.697	11 3 2.1	96.68
6	20 32 16.08	24.863	17 15 54.0	57.38	6	22 26 28.46	22.649	10 53 20.4	97.21
7	20 34 45.14	24.824	17 10 6.4	58.48	7	22 28 44.21	22.602	10 43 35.6	97.72
8	20 37 13.97	24.785	17 4 12.2	59.58	8	22 30 59.68	22.553	10 33 47.8	98.23
9	20 39 42.56	24.745	16 58 11.4	60.68	9	22 33 14.85	22.506	10 23 56.9	98.73
10	20 42 10.91	24.705	16 52 4.1	61.76	10	22 35 29.75	22.460	10 14 3.1	99.20
11	20 44 39.02	24.664	16 45 50.3	62.83	11	22 37 44.37	22.413	10 4 6.5	99.67
12	20 47 6.88	24.623	16 39 30.1	63.88	12	22 39 58.70	22.365	9 54 7.1	100.12
13	20 49 34.50	24.582	16 33 3.7	64.93	13	22 42 12.75	22.319	9 44 5.1	100.56
14	20 52 1.86	24.538	16 26 30.9	65.98	14	22 44 26.53	22.273	9 34 0.4	100.99
15	20 54 28.96	24.496	16 19 52.0	66.99	15	22 46 40.03	22.227	9 23 53.2	101.40
16	20 56 55.81	24.453	16 13 7.0	68.01	16	22 48 53.25	22.181	9 13 43.6	101.81
17	20 59 22.40	24.409	16 6 15.9	69.01	17	22 51 6.20	22.135	9 3 31.5	102.21
18	21 1 48.72	24.365	15 59 18.9	70.00	18	22 53 18.87	22.089	8 53 17.1	102.58
19	21 4 14.78	24.321	15 52 15.9	70.98	19	22 55 31.27	22.045	8 43 0.5	102.94
20	21 6 40.57	24.276	15 45 7.2	71.94	20	22 57 43.41	22.001	8 32 41.8	103.30
21	21 9 6.09	24.231	15 37 52.6	72.90	21	22 59 55.28	21.957	8 22 20.9	103.65
22	21 11 31.34	24.186	15 30 32.4	73.83	22	23 2 6.89	21.913	8 11 58.0	103.98
23	21 13 56.32	24.140	S. 15 23 6.6	74.76	23	23 4 18.23	21.868	S. 8 1 33.1	104.31
THURSDAY 14.					SATURDAY 16.				
	h m s	s				h m s	s		
0	21 16 21.02	24.093	S. 15 15 35.3	75.68	0	23 6 29.31	21.825	S. 7 51 6.3	104.61
1	21 18 45.44	24.047	15 7 58.5	76.58	1	23 8 40.13	21.783	7 40 37.8	104.90
2	21 21 9.58	24.000	15 0 16.3	77.48	2	23 10 50.70	21.739	7 30 7.5	105.19
3	21 23 33.44	23.953	14 52 28.8	78.36	3	23 13 1.00	21.697	7 19 35.5	105.47
4	21 25 57.02	23.907	14 44 36.0	79.23	4	23 15 11.06	21.655	7 9 1.9	105.73
5	21 28 20.32	23.859	14 36 38.1	80.08	5	23 17 20.86	21.613	6 58 26.8	105.98
6	21 30 43.33	23.811	14 28 35.1	80.92	6	23 19 30.41	21.572	6 47 50.2	106.22
7	21 33 6.05	23.763	14 20 27.1	81.74	7	23 21 39.72	21.532	6 37 12.2	106.45
8	21 35 28.49	23.716	14 12 11.2	82.56	8	23 23 48.79	21.491	6 26 32.8	106.67
9	21 37 50.64	23.668	14 3 56.4	83.36	9	23 25 57.61	21.450	6 15 52.2	106.87
10	21 40 12.50	23.619	13 55 33.9	84.14	10	23 28 6.19	21.410	6 5 10.4	107.06
11	21 42 34.07	23.571	13 47 6.7	84.93	11	23 30 14.53	21.371	5 54 27.5	107.24
12	21 44 55.35	23.523	13 38 34.8	85.69	12	23 32 22.64	21.332	5 43 43.5	107.42
13	21 47 16.34	23.473	13 29 58.4	86.43	13	23 34 30.51	21.293	5 32 58.5	107.58
14	21 49 37.03	23.424	13 21 17.6	87.18	14	23 36 38.16	21.255	5 22 12.5	107.73
15	21 51 57.43	23.377	13 12 32.3	87.91	15	23 38 45.57	21.217	5 11 25.7	107.88
16	21 54 17.55	23.328	13 3 42.7	88.61	16	23 40 52.76	21.180	5 0 38.0	108.01
17	21 56 37.37	23.278	12 54 49.0	89.31	17	23 42 59.73	21.143	4 49 49.6	108.13
18	21 58 56.89	23.230	12 45 51.0	90.00	18	23 45 6.48	21.107	4 39 0.5	108.23
19	22 1 16.13	23.182	12 36 49.0	90.67	19	23 47 13.01	21.070	4 28 10.8	108.33
20	22 3 35.07	23.133	12 27 43.0	91.33	20	23 49 19.32	21.034	4 17 20.5	108.43
21	22 5 53.72	23.083	12 18 33.1	91.98	21	23 51 25.42	20.999	4 6 29.7	108.51
22	22 8 12.07	23.035	12 9 19.3	92.61	22	23 53 31.31	20.964	3 55 38.4	108.58
23	22 10 30.14	22.987	12 0 1.8	93.23	23	23 55 36.99	20.930	3 44 46.8	108.63
24	22 12 47.91	22.938	S. 11 50 40.6	93.83	24	23 57 42.47	20.897	S. 3 33 54.8	108.69

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
SUNDAY 17.					TUESDAY 19.				
	h m s	s				h m s	s		
0	23 57 42.47	20.897	S. 3 33 54.8	108.69	0	1 34 59.67	19.823	N. 4 56 56.9	101.19
1	23 59 47.75	20.863	3 23 2.5	108.73	1	1 36 58.57	19.812	5 7 3.0	100.85
2	0 1 52.83	20.830	3 12 10.1	108.75	2	1 38 57.41	19.801	5 17 7.1	100.53
3	0 3 57.71	20.797	3 1 17.5	108.78	3	1 40 56.18	19.790	5 27 9.3	100.18
4	0 6 2.39	20.765	2 50 24.7	108.79	4	1 42 54.89	19.781	5 37 9.3	99.82
5	0 8 6.89	20.734	2 39 32.0	108.78	5	1 44 53.55	19.773	5 47 7.1	99.47
6	0 10 11.20	20.703	2 28 39.3	108.78	6	1 46 52.16	19.764	5 57 2.9	99.11
7	0 12 15.32	20.672	2 17 46.6	108.78	7	1 48 50.72	19.756	6 6 56.4	98.73
8	0 14 19.26	20.642	2 6 54.0	108.74	8	1 50 49.23	19.748	6 16 47.7	98.37
9	0 16 23.02	20.612	1 56 1.7	108.71	9	1 52 47.70	19.741	6 26 36.8	97.99
10	0 18 26.60	20.583	1 45 9.5	108.67	10	1 54 46.12	19.733	6 36 23.6	97.60
11	0 20 30.01	20.553	1 34 17.7	108.61	11	1 56 44.50	19.728	6 46 8.0	97.21
12	0 22 33.24	20.525	1 23 26.2	108.56	12	1 58 42.85	19.722	6 55 50.1	96.82
13	0 24 36.31	20.498	1 12 35.0	108.48	13	2 0 41.16	19.716	7 5 29.8	96.41
14	0 26 39.21	20.470	1 1 44.4	108.40	14	2 2 39.44	19.711	7 15 7.0	96.00
15	0 28 41.95	20.443	0 50 54.2	108.33	15	2 4 37.69	19.706	7 24 41.8	95.59
16	0 30 44.53	20.417	0 40 4.5	108.23	16	2 6 35.91	19.702	7 34 14.1	95.18
17	0 32 46.95	20.391	0 29 15.5	108.12	17	2 8 34.11	19.698	7 43 43.9	94.75
18	0 34 49.22	20.365	0 18 27.1	108.01	18	2 10 32.29	19.695	7 53 11.1	94.32
19	0 36 51.33	20.340	S. 0 7 39.4	107.89	19	2 12 30.45	19.692	8 2 35.7	93.88
20	0 38 53.30	20.316	N. 0 3 7.6	107.76	20	2 14 28.59	19.688	8 11 57.7	93.44
21	0 40 55.12	20.292	0 13 53.7	107.63	21	2 16 26.71	19.687	8 21 17.0	93.00
22	0 42 56.80	20.268	0 24 39.1	107.48	22	2 18 24.83	19.685	8 30 33.7	92.55
23	0 44 58.34	20.245	N. 0 35 23.5	107.33	23	2 20 22.93	19.683	N. 8 39 47.6	92.09
MONDAY 18.					WEDNESDAY 20.				
0	0 46 59.74	20.222	N. 0 46 7.1	107.18	0	2 22 21.03	19.683	N. 8 48 58.8	91.63
1	0 49 1.00	20.200	0 56 49.6	107.00	1	2 24 19.12	19.682	8 58 7.2	91.17
2	0 51 2.14	20.179	1 7 31.1	106.83	2	2 26 17.21	19.682	9 7 12.8	90.69
3	0 53 3.15	20.158	1 18 11.5	106.65	3	2 28 15.30	19.682	9 16 15.5	90.22
4	0 55 4.03	20.137	1 28 50.9	106.46	4	2 30 13.39	19.683	9 25 15.4	89.73
5	0 57 4.79	20.116	1 39 29.0	106.26	5	2 32 11.49	19.684	9 34 12.3	89.25
6	0 59 5.42	20.096	1 50 6.0	106.06	6	2 34 9.60	19.685	9 43 6.4	88.77
7	1 1 5.94	20.078	2 0 41.7	105.84	7	2 36 7.71	19.686	9 51 57.5	88.26
8	1 3 6.35	20.059	2 11 16.1	105.63	8	2 38 5.83	19.688	10 0 45.5	87.76
9	1 5 6.65	20.041	2 21 49.2	105.39	9	2 40 3.97	19.691	10 9 30.6	87.26
10	1 7 6.84	20.023	2 32 20.8	105.16	10	2 42 2.12	19.693	10 18 12.6	86.75
11	1 9 6.92	20.005	2 42 51.1	104.93	11	2 44 0.29	19.698	10 26 51.6	86.23
12	1 11 6.90	19.988	2 53 19.9	104.68	12	2 45 58.49	19.701	10 35 27.4	85.71
13	1 13 6.78	19.972	3 3 47.2	104.43	13	2 47 56.70	19.704	10 44 0.1	85.18
14	1 15 6.56	19.956	3 14 13.0	104.17	14	2 49 54.94	19.708	10 52 29.6	84.66
15	1 17 6.25	19.941	3 24 37.2	103.90	15	2 51 53.20	19.713	11 0 56.0	84.13
16	1 19 5.85	19.926	3 34 59.8	103.62	16	2 53 51.49	19.718	11 9 19.1	83.58
17	1 21 5.36	19.911	3 45 20.6	103.33	17	2 55 49.81	19.723	11 17 39.0	83.04
18	1 23 4.78	19.897	3 55 39.8	103.05	18	2 57 48.17	19.729	11 25 55.6	82.48
19	1 25 4.12	19.883	4 5 57.2	102.76	19	2 59 46.56	19.734	11 34 8.8	81.93
20	1 27 3.38	19.870	4 16 12.9	102.46	20	3 1 44.98	19.740	11 42 18.8	81.38
21	1 29 2.56	19.858	4 26 26.7	102.15	21	3 3 43.44	19.748	11 50 25.4	80.82
22	1 31 1.67	19.845	4 36 38.7	101.83	22	3 5 41.95	19.754	11 58 28.6	80.25
23	1 33 0.70	19.833	4 46 48.7	101.52	23	3 7 40.49	19.761	12 6 28.4	79.68
24	1 34 59.67	19.823	N. 4 56 56.9	101.19	24	3 9 39.08	19.769	N. 12 14 24.7	79.10

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
THURSDAY 21.					SATURDAY 23.				
	h m s	s	N. 12 14 24.7	79.10		h m s	s	N. 17 19 33.5	46.46
0	3 9 39.08	19.769	12 22 17.6	78.52	0	4 45 53.01	20.401	17 24 9.9	45.68
1	3 11 37.72	19.777	12 30 6.9	77.93	1	4 47 55.47	20.418	17 28 41.7	44.91
2	3 13 36.40	19.785	12 37 52.8	77.35	2	4 49 58.02	20.434	17 33 8.8	44.12
3	3 15 35.14	19.793	12 45 35.1	76.75	3	4 52 0.68	20.451	17 37 31.1	43.33
4	3 17 33.92	19.802	12 53 13.8	76.15	4	4 54 3.43	20.468	17 41 48.7	42.54
5	3 19 32.76	19.811	13 0 48.9	75.55	5	4 56 6.29	20.485	17 46 1.6	41.74
6	3 21 31.65	19.820	13 8 20.4	74.94	6	4 58 9.25	20.502	17 50 9.6	40.94
7	3 23 30.60	19.830	13 15 48.2	74.33	7	5 0 12.31	20.518	17 54 12.9	40.14
8	3 25 29.61	19.839	13 23 12.4	73.73	8	5 2 15.47	20.535	17 58 11.3	39.33
9	3 27 28.67	19.849	13 30 32.9	73.10	9	5 4 18.73	20.553	18 2 4.9	38.53
10	3 29 27.80	19.860	13 37 49.6	72.47	10	5 6 22.10	20.569	18 5 53.6	37.71
11	3 31 26.99	19.871	13 45 2.5	71.84	11	5 8 25.56	20.586	18 9 37.4	36.89
12	3 33 26.25	19.882	13 52 11.7	71.22	12	5 10 29.13	20.603	18 13 16.3	36.07
13	3 35 25.57	19.893	13 59 17.1	70.58	13	5 12 32.80	20.620	18 16 50.2	35.24
14	3 37 24.96	19.903	14 6 18.6	69.92	14	5 14 36.57	20.638	18 20 19.2	34.42
15	3 39 24.41	19.915	14 13 16.2	69.28	15	5 16 40.45	20.654	18 23 43.2	33.59
16	3 41 23.94	19.928	14 20 10.0	68.63	16	5 18 44.42	20.670	18 27 2.3	32.76
17	3 43 23.55	19.940	14 26 59.8	67.98	17	5 20 48.49	20.688	18 30 16.3	31.92
18	3 45 23.22	19.952	14 33 45.8	67.33	18	5 22 52.67	20.705	18 33 25.3	31.08
19	3 47 22.97	19.964	14 40 27.7	66.66	19	5 24 56.95	20.721	18 36 29.3	30.24
20	3 49 22.79	19.977	14 47 5.7	65.99	20	5 27 1.32	20.738	18 39 28.2	29.39
21	3 51 22.69	19.990	14 53 39.6	65.32	21	5 29 5.80	20.754	18 42 22.0	28.53
22	3 53 22.67	20.003	N. 15 0 9.5	64.65	22	5 31 10.37	20.771	N. 18 45 10.6	27.68
23	3 55 22.73	20.017			23	5 33 15.05	20.788		
FRIDAY 22.					SUNDAY 24.				
	h m s	s	N. 15 6 35.4	63.97		h m s	s	N. 18 47 54.2	26.83
0	3 57 22.87	20.030	15 12 57.1	63.28	0	5 35 19.82	20.803	18 50 32.6	25.97
1	3 59 23.09	20.044	15 19 14.8	62.60	1	5 37 24.69	20.820	18 53 5.8	25.11
2	4 1 23.40	20.058	15 25 28.3	61.90	2	5 39 29.66	20.837	18 55 33.9	24.25
3	4 3 23.79	20.072	15 31 37.6	61.21	3	5 41 34.73	20.853	18 57 56.8	23.38
4	4 5 24.26	20.086	15 37 42.8	60.51	4	5 43 39.89	20.868	19 0 14.4	22.50
5	4 7 24.82	20.101	15 43 43.7	59.80	5	5 45 45.15	20.885	19 2 26.8	21.63
6	4 9 25.47	20.116	15 49 40.4	59.10	6	5 47 50.51	20.901	19 4 34.0	20.76
7	4 11 26.21	20.131	15 55 32.9	58.38	7	5 49 55.96	20.916	19 6 35.9	19.88
8	4 13 27.04	20.145	16 1 21.0	57.67	8	5 52 1.50	20.932	19 8 32.5	18.99
9	4 15 27.95	20.160	16 7 4.9	56.95	9	5 54 7.14	20.948	19 10 23.8	18.11
10	4 17 28.96	20.176	16 12 44.4	56.23	10	5 56 12.87	20.963	19 12 9.8	17.23
11	4 19 30.06	20.191	16 18 19.6	55.50	11	5 58 18.69	20.978	19 13 50.5	16.33
12	4 21 31.25	20.206	16 23 50.4	54.77	12	6 0 24.60	20.993	19 15 25.8	15.44
13	4 23 32.53	20.222	16 29 16.8	54.03	13	6 2 30.60	21.008	19 16 55.8	14.55
14	4 25 33.91	20.238	16 34 38.8	53.29	14	6 4 36.70	21.023	19 18 20.4	13.65
15	4 27 35.38	20.253	16 39 56.3	52.54	15	6 6 42.88	21.037	19 19 39.6	12.75
16	4 29 36.95	20.270	16 45 9.3	51.80	16	6 8 49.14	21.052	19 20 53.4	11.84
17	4 31 38.62	20.286	16 50 17.9	51.05	17	6 10 55.50	21.067	19 22 1.7	10.94
18	4 33 40.38	20.302	16 55 21.9	50.29	18	6 13 1.94	21.080	19 23 4.7	10.04
19	4 35 42.24	20.318	17 0 21.4	49.53	19	6 15 8.46	21.094	19 24 2.2	9.13
20	4 37 44.20	20.334	17 5 16.3	48.77	20	6 17 15.07	21.108	19 25 54.2	8.22
21	4 39 46.25	20.351	17 10 6.7	48.01	21	6 19 21.76	21.122	19 26 57.4	7.31
22	4 41 48.41	20.368	17 14 52.4	47.23	22	6 21 28.53	21.135		6.38
23	4 43 50.66	20.383			23	6 23 35.38	21.148		
24	4 45 53.01	20.401	N. 17 19 33.5	46.46	24	6 25 42.31	21.162		

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
MONDAY 25.					WEDNESDAY 27.				
	h m s	s	N. 19° 26' 57".4	"		h m s	s	N. 18° 5' 24".8	"
0	6 25 42.31	21.162	19 26 57.4	5.47	0	8 8 21.89	21.520	18 5 24.8	39.54
1	6 27 49.32	21.175	19 27 27.5	4.55	1	8 10 31.01	21.522	18 1 24.7	40.48
2	6 29 56.41	21.188	19 27 52.0	3.63	2	8 12 40.15	21.523	17 57 19.1	41.39
3	6 32 3.57	21.200	19 28 11.1	2.72	3	8 14 49.29	21.524	17 53 8.0	42.31
4	6 34 10.81	21.213	19 28 24.6	1.78	4	8 16 58.44	21.525	17 48 51.4	43.23
5	6 36 18.12	21.224	19 28 32.5	0.86	5	8 19 7.59	21.525	17 44 29.2	44.16
6	6 38 25.50	21.236	19 28 34.9	0.07	6	8 21 16.74	21.526	17 40 1.5	45.08
7	6 40 32.95	21.248	19 28 31.7	1.00	7	8 23 25.90	21.527	17 35 28.3	45.98
8	6 42 40.47	21.259	19 28 22.9	1.93	8	8 25 35.06	21.526	17 30 49.7	46.90
9	6 44 48.06	21.271	19 28 8.5	2.86	9	8 27 44.21	21.526	17 26 5.5	47.82
10	6 46 55.72	21.282	19 27 48.6	3.79	10	8 29 53.37	21.526	17 21 15.9	48.72
11	6 49 3.44	21.293	19 27 23.0	4.73	11	8 32 2.52	21.525	17 16 20.9	49.63
12	6 51 11.23	21.303	19 26 51.8	5.67	12	8 34 11.67	21.524	17 11 20.4	50.53
13	6 53 19.07	21.313	19 26 15.0	6.60	13	8 36 20.81	21.523	17 6 14.5	51.43
14	6 55 26.98	21.323	19 25 32.6	7.53	14	8 38 29.95	21.523	17 1 3.3	52.32
15	6 57 34.95	21.333	19 24 44.6	8.48	15	8 40 39.08	21.521	16 55 46.7	53.22
16	6 59 42.98	21.343	19 23 50.9	9.43	16	8 42 48.20	21.519	16 50 24.7	54.11
17	7 1 51.07	21.352	19 22 51.5	10.37	17	8 44 57.31	21.518	16 44 57.4	54.99
18	7 3 59.20	21.361	19 21 46.5	11.30	18	8 47 6.41	21.515	16 39 24.8	55.88
19	7 6 7.40	21.371	19 20 35.9	12.23	19	8 49 15.49	21.513	16 33 46.9	56.76
20	7 8 15.65	21.379	19 19 19.7	13.18	20	8 51 24.57	21.512	16 28 3.7	57.63
21	7 10 23.95	21.387	19 17 57.7	14.13	21	8 53 33.63	21.509	16 22 15.3	58.51
22	7 12 32.29	21.395	19 16 30.1	15.08	22	8 55 42.68	21.507	16 16 21.6	59.38
23	7 14 40.69	21.403	N. 19 14 56.8	16.02	23	8 57 51.71	21.503	N. 16 10 22.8	60.24
TUESDAY 26.					THURSDAY 28.				
	h m s	s	N. 19 13 17.9	"		h m s	s	N. 16 4 18.7	"
0	7 16 49.13	21.411	19 13 17.9	16.96	0	9 0 0.72	21.501	16 4 18.7	61.11
1	7 18 57.62	21.418	19 11 33.3	17.91	1	9 2 9.72	21.498	15 58 9.5	61.96
2	7 21 6.15	21.426	19 9 43.0	18.86	2	9 4 18.69	21.494	15 51 55.2	62.82
3	7 23 14.73	21.433	19 7 47.0	19.80	3	9 6 27.65	21.492	15 45 35.7	63.67
4	7 25 23.34	21.438	19 5 45.4	20.74	4	9 8 36.59	21.488	15 39 11.2	64.52
5	7 27 31.99	21.445	19 3 38.1	21.69	5	9 10 45.51	21.485	15 32 41.5	65.36
6	7 29 40.68	21.452	19 1 25.1	22.64	6	9 12 54.41	21.482	15 26 6.9	66.18
7	7 31 49.41	21.458	18 59 6.4	23.58	7	9 15 3.29	21.478	15 19 27.3	67.03
8	7 33 58.18	21.463	18 56 42.1	24.53	8	9 17 12.14	21.473	15 12 42.6	67.86
9	7 36 6.97	21.468	18 54 12.1	25.48	9	9 19 20.97	21.470	15 5 53.0	68.68
10	7 38 15.80	21.474	18 51 36.4	26.42	10	9 21 29.78	21.466	14 58 58.5	69.49
11	7 40 24.66	21.478	18 48 55.1	27.36	11	9 23 38.56	21.462	14 51 59.1	70.31
12	7 42 33.54	21.483	18 46 8.1	28.31	12	9 25 47.32	21.458	14 44 54.8	71.12
13	7 44 42.46	21.488	18 43 15.4	29.25	13	9 27 56.06	21.454	14 37 45.7	71.92
14	7 46 51.40	21.492	18 40 17.1	30.18	14	9 30 4.77	21.449	14 30 31.7	72.73
15	7 49 0.36	21.496	18 37 13.2	31.13	15	9 32 13.45	21.445	14 23 13.0	73.51
16	7 51 9.35	21.500	18 34 3.6	32.07	16	9 34 22.11	21.441	14 15 49.6	74.30
17	7 53 18.36	21.503	18 30 48.4	33.00	17	9 36 30.74	21.436	14 8 21.4	75.09
18	7 55 27.38	21.506	18 27 27.6	33.94	18	9 38 39.34	21.432	14 0 48.5	75.87
19	7 57 36.43	21.509	18 24 1.1	34.88	19	9 40 47.92	21.428	13 53 11.0	76.63
20	7 59 45.49	21.512	18 20 29.1	35.81	20	9 42 56.47	21.423	13 45 28.9	77.41
21	8 1 54.57	21.514	18 16 51.4	36.75	21	9 45 4.99	21.418	13 37 42.1	78.17
22	8 4 3.66	21.517	18 13 8.1	37.68	22	9 47 13.49	21.414	13 29 50.9	78.92
23	8 6 12.77	21.519	18 9 19.2	38.61	23	9 49 21.96	21.409	13 21 55.1	79.67
24	8 8 21.89	21.520	N. 18 5 24.8	39.54	24	9 51 30.40	21.404	N. 13 13 54.9	80.41

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
FRIDAY 29.					SUNDAY 31.				
	h m s	s	N. 13 13 54.9	80.41		h m s	s	N. 5 35 26.5	107.62
0	9 51 30.40	21.404	13 5 50.2	81.15	0	11 33 51.33	21.297	5 24 39.7	107.98
1	9 53 38.81	21.400	12 57 41.1	81.88	1	11 35 59.12	21.299	5 13 50.8	108.33
2	9 55 47.20	21.395	12 49 27.6	82.61	2	11 38 6.92	21.302	5 2 59.8	108.68
3	9 57 55.55	21.390	12 41 9.8	83.33	3	11 40 14.74	21.304	4 52 6.7	109.01
4	10 0 3.88	21.387	12 32 47.7	84.04	4	11 42 22.57	21.308	4 41 11.7	109.33
5	10 2 12.19	21.383	12 24 21.3	84.75	5	11 44 30.43	21.312	4 30 14.8	109.64
6	10 4 20.47	21.378	12 15 50.7	85.44	6	11 46 38.31	21.316	4 19 16.0	109.95
7	10 6 28.72	21.373	12 7 16.0	86.13	7	11 48 46.22	21.320	4 8 15.4	110.25
8	10 8 36.94	21.368	11 58 37.1	86.83	8	11 50 54.15	21.324	3 57 13.0	110.53
9	10 10 45.14	21.364	11 49 54.1	87.51	9	11 53 2.11	21.328	3 46 9.0	110.81
10	10 12 53.31	21.360	11 41 7.0	88.18	10	11 55 10.09	21.333	3 35 3.3	111.08
11	10 15 1.46	21.356	11 32 16.0	88.83	11	11 57 18.11	21.340	3 23 56.1	111.33
12	10 17 9.58	21.351	11 23 21.0	89.50	12	11 59 26.17	21.345	3 12 47.4	111.58
13	10 19 17.67	21.347	11 14 22.0	90.16	13	12 1 34.25	21.351	3 1 37.2	111.81
14	10 21 25.74	21.343	11 5 19.1	90.80	14	12 3 42.38	21.358	2 50 25.7	112.03
15	10 23 33.79	21.339	10 56 12.4	91.43	15	12 5 50.54	21.364	2 39 12.8	112.26
16	10 25 41.81	21.335	10 47 1.9	92.06	16	12 7 58.75	21.372	2 27 58.6	112.46
17	10 27 49.81	21.332	10 37 47.7	92.68	17	12 10 7.00	21.378	2 16 43.3	112.65
18	10 29 57.79	21.328	10 28 29.7	93.30	18	12 12 15.29	21.386	2 5 26.8	112.85
19	10 32 5.75	21.324	10 19 8.1	93.91	19	12 14 23.63	21.393	1 54 9.1	113.03
20	10 34 13.68	21.321	10 9 42.8	94.52	20	12 16 32.01	21.402	1 42 50.5	113.18
21	10 36 21.60	21.318	10 0 13.9	95.11	21	12 18 40.45	21.412	1 31 31.0	113.33
22	10 38 29.50	21.315	N. 9 50 41.5	95.68	22	12 20 48.95	21.420	N. 1 20 10.5	113.48
23	10 40 37.38	21.312			23	12 22 57.50	21.429		
SATURDAY 30.					MONDAY, SEPT. 1.				
0	10 42 45.24	21.308	N. 9 41 5.7	96.26	0	12 25 6.10	21.439	N. 1 8 49.2	113.62
1	10 44 53.08	21.306	9 31 26.4	96.84					
2	10 47 0.91	21.303	9 21 43.6	97.40					
3	10 49 8.72	21.301	9 11 57.6	97.94					
4	10 51 16.52	21.299	9 2 8.3	98.49					
5	10 53 24.31	21.297	8 52 15.7	99.03					
6	10 55 32.08	21.294	8 42 19.9	99.57					
7	10 57 39.84	21.293	8 32 20.9	100.08					
8	10 59 47.60	21.292	8 22 18.9	100.59					
9	11 1 55.34	21.290	8 12 13.8	101.10					
10	11 4 3.08	21.289	8 2 5.7	101.59					
11	11 6 10.81	21.288	7 51 54.7	102.08					
12	11 8 18.53	21.287	7 41 40.7	102.57					
13	11 10 26.25	21.287	7 31 23.9	103.03					
14	11 12 33.97	21.287	7 21 4.3	103.49					
15	11 14 41.69	21.287	7 10 42.0	103.94					
16	11 16 49.41	21.287	7 0 17.0	104.39					
17	11 18 57.13	21.287	6 49 49.3	104.83					
18	11 21 4.85	21.288	6 39 19.1	105.25					
19	11 23 12.58	21.288	6 28 46.3	105.67					
20	11 25 20.31	21.289	6 18 11.1	106.07					
21	11 27 28.05	21.291	6 7 33.5	106.48					
22	11 29 35.80	21.293	5 56 53.4	106.87					
23	11 31 43.56	21.294	5 46 11.1	107.24					
24	11 33 51.33	21.297	N. 5 35 26.5	107.62					

Aug. 7 | ☽ First Quarter - 15 41.3

14 | ☾ Full Moon - 8 19.0

21 | ☾ Last Quarter - 21 10.4

29 | ● New Moon - 20 36.8

Aug. 11 | ☾ Perigee - 7.9

23 | ☾ Apogee - 5.7

AT APPARENT NOON.

Date.	THE SUN'S				Sidereal Time of the Semi- diameter passing the Meridian.*	Equation of Time, to be subtracted from Apparent Time.	Var. in hour.
	Apparent Right Ascension.	Var. in hour.	Apparent Declination.	Var. in hour.			
	h m s	s	N. ° ' "	"	m s	m s	s
Mon.	1 10 41 26.74	9.072	N. 8 17 36.4	54.43	1 4.34	0 2.28	0.782
Tues.	2 10 45 4.32	9.060	7 55 46.2	54.75	1 4.30	0 21.20	0.794
Wed.	3 10 48 41.61	9.048	7 33 48.4	55.06	1 4.26	0 40.41	0.806
Thur.	4 10 52 18.62	9.036	7 11 43.3	55.36	1 4.22	0 59.90	0.817
Frid.	5 10 55 55.36	9.026	6 49 31.2	55.64	1 4.19	1 19.65	0.828
Sat.	6 10 59 31.86	9.016	6 27 12.5	55.91	1 4.16	1 39.65	0.838
Sun.	7 11 3 8.13	9.007	6 4 47.5	56.16	1 4.13	1 59.88	0.847
Mon.	8 11 6 44.18	8.998	5 42 16.6	56.41	1 4.10	2 20.32	0.856
Tues.	9 11 10 20.05	8.991	5 19 40.0	56.63	1 4.08	2 40.95	0.863
Wed.	10 11 13 55.75	8.984	4 56 58.2	56.85	1 4.06	3 1.75	0.870
Thur.	11 11 17 31.30	8.979	4 34 11.3	57.05	1 4.04	3 22.60	0.876
Frid.	12 11 21 6.73	8.974	4 11 19.7	57.24	1 4.02	3 43.76	0.880
Sat.	13 11 24 42.06	8.970	3 48 23.7	57.42	1 4.00	4 4.92	0.883
Sun.	14 11 28 17.31	8.968	3 25 23.6	57.58	1 4.00	4 26.16	0.886
Mon.	15 11 31 52.52	8.966	3 2 19.8	57.73	1 3.99	4 47.45	0.888
Tues.	16 11 35 27.69	8.965	2 39 12.5	57.87	1 3.99	5 8.77	0.888
Wed.	17 11 39 2.86	8.966	2 16 2.1	57.99	1 3.99	5 30.09	0.888
Thur.	18 11 42 38.05	8.967	1 52 48.9	58.10	1 3.99	5 51.40	0.887
Frid.	19 11 46 13.28	8.969	1 29 33.2	58.20	1 3.99	6 12.67	0.885
Sat.	20 11 49 48.56	8.972	1 6 15.3	58.29	1 4.00	6 33.88	0.882
Sun.	21 11 53 23.92	8.976	0 42 55.5	58.35	1 4.01	6 55.01	0.878
Mon.	22 11 56 59.39	8.980	N. 0 19 34.3	58.41	1 4.02	7 16.04	0.874
Tues.	23 12 0 34.98	8.986	S. 0 3 48.1	58.45	1 4.04	7 36.94	0.868
Wed.	24 12 4 10.70	8.992	0 27 11.3	58.48	1 4.06	7 57.71	0.862
Thur.	25 12 7 46.59	8.999	0 50 35.0	58.49	1 4.08	8 18.32	0.855
Frid.	26 12 11 22.65	9.007	1 13 58.8	58.49	1 4.11	8 38.75	0.847
Sat.	27 12 14 58.91	9.015	1 37 22.4	58.47	1 4.14	8 58.99	0.839
Sun.	28 12 18 35.39	9.025	2 0 45.4	58.44	1 4.17	9 19.01	0.830
Mon.	29 12 22 12.09	9.034	2 24 7.4	58.39	1 4.21	9 38.81	0.820
Tues.	30 12 25 49.03	9.045	2 47 28.1	58.33	1 4.25	9 58.36	0.809
Wed.	31 12 29 26.24	9.056	S. 3 10 47.1	58.25	1 4.29	10 17.65	0.798

* Mean Time of the Semidiameter passing may be found by subtracting 0.18 from the Sidereal Time.

AT MEAN NOON.

Date.		THE SUN'S			Equation of Time, to be subtracted from Apparent Time.	Sidereal Time.
		Apparent Right Ascension.	Apparent Declination.	Semi- diameter.*		
		h m s	N. ° ' "	' "	m s	h m s
Mon.	1	10 41 26.74	N. 8 17 36.3	15 52.67	0 2.28	10 41 29.02
Tues.	2	10 45 4.37	7 55 45.9	15 52.90	0 21.20	10 45 25.58
Wed.	3	10 48 41.71	7 33 47.8	15 53.14	0 40.42	10 49 22.13
Thur.	4	10 52 18.77	7 11 42.3	15 53.38	0 59.91	10 53 18.68
Frid.	5	10 55 55.56	6 49 30.0	15 53.62	1 19.67	10 57 15.23
Sat.	6	10 59 32.11	6 27 11.0	15 53.87	1 39.68	11 1 11.79
Sun.	7	11 3 8.43	6 4 45.7	15 54.12	1 59.91	11 5 8.34
Mon.	8	11 6 44.53	5 42 14.4	15 54.37	2 20.36	11 9 4.89
Tues.	9	11 10 20.45	5 19 37.5	15 54.62	2 40.99	11 13 1.44
Wed.	10	11 13 56.20	4 56 55.3	15 54.88	3 1.79	11 16 58.00
Thur.	11	11 17 31.81	4 34 8.1	15 55.13	3 22.74	11 20 54.55
Frid.	12	11 21 7.29	4 11 16.1	15 55.38	3 43.81	11 24 51.10
Sat.	13	11 24 42.67	3 48 19.8	15 55.64	4 4.98	11 28 47.65
Sun.	14	11 28 17.98	3 25 19.4	15 55.90	4 26.23	11 32 44.20
Mon.	15	11 31 53.23	3 2 15.2	15 56.15	4 47.52	11 36 40.76
Tues.	16	11 35 28.46	2 39 7.6	15 56.41	5 8.85	11 40 37.31
Wed.	17	11 39 3.69	2 15 56.8	15 56.67	5 30.17	11 44 33.86
Thur.	18	11 42 38.93	1 52 43.2	15 56.92	5 51.48	11 48 30.41
Frid.	19	11 46 14.20	1 29 27.1	15 57.18	6 12.76	11 52 26.96
Sat.	20	11 49 49.54	1 6 8.9	15 57.44	6 33.97	11 56 23.52
Sun.	21	11 53 24.96	0 42 48.8	15 57.70	6 55.11	12 0 20.07
Mon.	22	11 57 0.48	N. 0 19 27.2	15 57.97	7 16.14	12 4 16.62
Tues.	23	12 0 36.12	S. 0 3 55.5	15 58.23	7 37.05	12 8 13.17
Wed.	24	12 4 11.90	0 27 19.0	15 58.50	7 57.83	12 12 9.72
Thur.	25	12 7 47.84	0 50 43.1	15 58.77	8 18.44	12 16 6.28
Frid.	26	12 11 23.95	1 14 7.2	15 59.04	8 38.87	12 20 2.83
Sat.	27	12 15 0.26	1 37 31.1	15 59.31	8 59.11	12 23 59.38
Sun.	28	12 18 36.79	2 0 54.4	15 59.58	9 19.14	12 27 55.93
Mon.	29	12 22 13.54	2 24 16.8	15 59.86	9 38.94	12 31 52.48
Tues.	30	12 25 50.54	2 47 37.8	16 0.13	9 58.49	12 35 49.03
Wed.	31	12 29 27.80	S. 3 10 57.1	16 0.41	10 17.79	12 39 45.59

* The Semidiameter for *Apparent* Noon may be assumed the same as that for *Mean* Noon.

MEAN TIME.

Day.	THE SUN'S <i>Apparent</i>		Logarithm of the Radius Vector of the Earth	Transit of the First Point of Aries.	THE MOON'S			
	Longitude.	Latitude.			Semidiameter.		Horizontal Parallax.	
	Noon.	Noon.			Noon.	Midnight.	Noon.	Midnight.
				h m s				
1	158° 44' 45".3	N. 0° 22'	0.0038643	13 16 20.16	15 47.95	15 51.54	57 59.11	58 12.29
2	159 42 52.7	0 30	.0037577	13 12 24.25	15 54.82	15 57.76	58 24.31	58 35.13
3	160 41 1.6	0 36	.0036494	13 8 28.35	16 0.38	16 2.67	58 44.73	58 53.14
4	161 39 11.9	0 39	0.0035396	13 4 32.44	16 4.64	16 6.28	59 0.35	59 6.40
5	162 37 23.7	0 39	.0034285	13 0 36.53	16 7.62	16 8.64	59 11.29	59 15.04
6	163 35 36.9	0 35	.0033163	12 56 40.63	16 9.34	16 9.72	59 17.62	59 19.00
7	164 33 51.6	0 28	0.0032030	12 52 44.72	16 9.75	16 9.41	59 19.11	59 17.88
8	165 32 7.8	0 18	.0030889	12 48 48.81	16 8.69	16 7.56	59 15.24	59 11.08
9	166 30 25.5	N. 0° 06'	.0029742	12 44 52.91	16 5.99	16 3.96	59 5.31	58 57.88
10	167 28 44.8	S. 0° 07'	0.0028589	12 40 57.00	16 1.47	15 58.52	58 48.74	58 37.89
11	168 27 5.7	0 21	.0027433	12 37 1.10	15 55.11	15 51.26	58 25.37	58 11.27
12	169 25 28.3	0 35	.0026274	12 33 5.19	15 47.03	15 42.45	57 55.73	57 38.94
13	170 23 52.8	0 48	0.0025112	12 29 9.28	15 37.60	15 32.55	57 21.13	57 2.59
14	171 22 19.1	0 60	.0023949	12 25 13.38	15 27.38	15 22.18	56 43.62	56 24.54
15	172 20 47.4	0 69	.0022784	12 21 17.47	15 17.04	15 12.06	56 5.68	55 47.38
16	173 19 17.8	0 76	0.0021617	12 17 21.56	15 7.32	15 2.90	55 29.98	55 13.77
17	174 17 50.2	0 80	.0020447	12 13 25.66	14 58.89	14 55.35	54 59.04	54 46.06
18	175 16 24.8	0 80	.0019274	12 9 29.75	14 52.35	14 49.94	54 35.05	54 26.22
19	176 15 1.6	0 78	0.0018097	12 5 33.85	14 48.17	14 47.07	54 19.72	54 15.67
20	177 13 40.5	0 74	.0016916	12 1 37.94	14 46.66	14 46.97	54 14.19	54 15.30
21	178 12 21.7	0 68	.0015730	11 57 42.03	14 47.99	14 49.72	54 19.04	54 25.38
22	179 11 5.1	0 59	0.0014538	11 53 46.13	14 52.14	14 55.22	54 34.26	54 45.58
23	180 9 50.7	0 47	.0013340	11 49 50.22	14 58.93	15 3.21	54 59.19	55 14.90
24	181 8 38.6	0 35	.0012135	11 45 54.32	15 8.00	15 13.22	55 32.48	55 51.65
25	182 7 28.7	0 23	0.0010923	11 41 58.41	15 18.79	15 24.61	56 12.09	56 33.44
26	183 6 21.0	S. 0° 10'	.0009702	11 38 2.50	15 30.57	15 36.55	56 55.31	57 17.28
27	184 5 15.4	N. 0° 02'	.0008472	11 34 6.60	15 42.45	15 48.14	57 38.92	57 59.79
28	185 4 12.0	0 13	0.0007234	11 30 10.69	15 53.50	15 58.44	58 19.48	58 37.60
29	186 3 10.6	0 23	.0005986	11 26 14.79	16 2.85	16 6.67	58 53.80	59 7.82
30	187 2 11.2	0 29	.0004730	11 22 18.88	16 9.84	16 12.31	59 19.44	59 28.53
31	188 1 13.7	N. 0° 32'	0.0003465	11 18 22.97	16 14.09	16 15.18	59 35.06	59 39.05

MEAN TIME.

Day	THE MOON'S						
	Longitude.		Latitude.		Age.	Meridian Passage.	
	Noon.	Midnight.	Noon.	Midnight.	Noon.	Upper.	Lower.
					d	h m	h m
1	185° 18' 21.4"	192° 9' 2.0"	N. 3° 32' 45.6"	N. 3° 58' 59.2"	2.14	1 47.2	14 11.8
2	199 2 45.5	205 59 12.7	4 21 56.0	4 41 11.0	3.14	2 36.8	15 2.0
3	212 58 3.6	219 58 58.2	4 56 22.7	5 7 13.2	4.14	3 27.6	15 53.7
4	227 1 36.1	234 5 37.7	5 13 29.2	5 15 2.1	5.14	4 20.3	16 47.4
5	241 10 43.6	248 16 35.7	5 11 48.1	5 3 48.6	6.14	5 15.0	17 43.2
6	255 22 56.0	262 29 27.4	4 51 9.7	4 34 2.5	7.14	6 11.8	18 40.8
7	269 35 53.4	276 41 57.2	4 12 43.1	3 47 31.9	8.14	7 9.9	19 39.2
8	283 47 22.2	290 51 51.3	3 18 53.6	2 47 16.4	9.14	8 8.4	20 37.4
9	297 55 6.6	304 56 49.8	2 13 11.9	1 37 14.0	10.14	9 6.0	21 34.1
10	311 56 41.7	318 54 22.8	N. 0 59 58.4	N. 0 22 1.7	11.14	10 1.6	22 28.5
11	325 49 33.3	332 41 53.4	S. 0 15 59.5	S. 0 53 29.5	12.14	10 54.8	23 20.4
12	339 31 4.2	346 16 48.2	1 29 54.3	2 4 42.5	13.14	11 45.5	* *
13	352 58 49.5	359 36 55.1	2 37 25.8	3 7 39.7	14.14	12 33.9	0 9.9
14	6 10 55.0	12 40 42.5	3 35 3.2	3 59 19.9	15.14	13 20.7	0 57.5
15	19 6 15.4	25 27 35.5	4 20 16.9	4 37 45.1	16.14	14 6.4	1 43.6
16	31 44 49.0	37 58 6.6	4 51 39.1	5 1 56.0	17.14	14 51.6	2 29.0
17	44 7 43.0	50 13 57.3	5 8 36.0	5 11 41.2	18.14	15 37.0	3 14.3
18	56 17 12.1	62 17 53.7	5 11 15.3	5 7 23.4	19.14	16 22.7	3 59.8
19	68 16 31.0	74 13 35.9	5 0 11.9	4 49 47.6	20.14	17 9.2	4 45.9
20	80 9 42.2	86 5 25.6	4 36 18.5	4 19 52.6	21.14	17 56.6	5 32.8
21	92 1 22.7	97 58 11.0	4 0 38.7	3 38 46.5	22.14	18 44.6	6 20.5
22	103 56 28.1	109 56 51.5	3 14 26.4	2 47 49.5	23.14	19 33.2	7 8.8
23	115 59 57.2	122 6 20.2	2 19 8.7	1 48 38.0	24.14	20 22.1	7 57.6
24	128 16 32.8	134 31 4.5	1 16 33.4	S. 0 43 13.1	25.14	21 11.1	8 46.6
25	140 50 20.8	147 14 42.8	S. 0 8 57.6	N. 0 25 50.3	26.14	22 0.1	9 35.6
26	153 44 26.0	160 19 39.8	N. 1 0 44.8	1 35 18.0	27.14	22 49.2	10 24.6
27	167 0 26.8	173 46 42.0	2 8 59.5	2 41 17.3	28.14	23 38.8	11 13.9
28	180 38 12.9	187 34 39.5	3 11 38.3	3 39 29.3	29.14	* *	12 3.8
29	194 35 34.6	201 40 24.4	4 4 18.2	4 25 35.1	0.66	0 29.2	12 54.8
30	208 48 29.9	215 59 8.3	4 42 53.0	4 55 49.8	1.66	1 20.9	13 47.3
31	223 11 34.7	230 25 3.9	N. 5 4 8.3	N. 5 7 37.6	2.66	2 14.3	14 41.8

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
MONDAY 1.					WEDNESDAY 3.				
	h m s	s	N. ° ' "	"		h m s	s	S. ° ' "	"
0	12 25 6.10	21.439	N. 1 8 49.2	113.62	0	14 9 49.90	22.338	S. 7 51 30.2	107.24
1	12 27 14.77	21.450	0 57 27.1	113.74	1	14 12 4.01	22.366	8 2 12.5	106.83
2	12 29 23.50	21.460	0 46 4.3	113.85	2	14 14 18.29	22.393	8 12 52.2	106.41
3	12 31 32.29	21.470	0 34 40.9	113.96	3	14 16 32.73	22.420	8 23 29.4	105.98
4	12 33 41.14	21.482	0 23 16.8	114.05	4	14 18 47.33	22.448	8 34 4.0	105.54
5	12 35 50.07	21.494	0 11 52.3	114.13	5	14 21 2.11	22.478	8 44 35.9	105.08
6	12 37 59.07	21.505	N. 0 0 27.3	114.20	6	14 23 17.06	22.506	8 55 5.0	104.61
7	12 40 8.13	21.518	S. 0 10 58.1	114.27	7	14 25 32.18	22.535	9 5 31.2	104.13
8	12 42 17.28	21.531	0 22 23.9	114.32	8	14 27 47.48	22.564	9 15 54.6	103.65
9	12 44 26.50	21.543	0 33 49.9	114.35	9	14 30 2.95	22.593	9 26 15.0	103.14
10	12 46 35.80	21.557	0 45 16.1	114.38	10	14 32 18.60	22.623	9 36 32.3	102.63
11	12 48 45.18	21.571	0 56 42.4	114.40	11	14 34 34.43	22.653	9 46 46.5	102.11
12	12 50 54.65	21.585	1 8 8.9	114.41	12	14 36 50.44	22.684	9 56 57.6	101.58
13	12 53 4.20	21.599	1 19 35.3	114.40	13	14 39 6.64	22.714	10 7 5.4	101.03
14	12 55 13.84	21.614	1 31 1.7	114.38	14	14 41 23.01	22.744	10 17 9.9	100.47
15	12 57 23.57	21.629	1 42 27.9	114.36	15	14 43 39.57	22.776	10 27 11.0	99.90
16	12 59 33.39	21.645	1 53 54.0	114.33	16	14 45 56.32	22.808	10 37 8.7	99.32
17	13 1 43.31	21.661	2 5 19.8	114.28	17	14 48 13.26	22.838	10 47 2.8	98.72
18	13 3 53.32	21.678	2 16 45.3	114.23	18	14 50 30.38	22.870	10 56 53.3	98.12
19	13 6 3.44	21.694	2 28 10.5	114.15	19	14 52 47.70	22.902	11 6 40.2	97.51
20	13 8 13.65	21.711	2 39 35.1	114.07	20	14 55 5.20	22.933	11 16 23.4	96.88
21	13 10 23.97	21.729	2 50 59.3	113.98	21	14 57 22.90	22.966	11 26 2.7	96.23
22	13 12 34.40	21.747	3 2 22.9	113.88	22	14 59 40.79	22.998	11 35 38.2	95.58
23	13 14 44.93	21.765	S. 3 13 45.8	113.76	23	15 1 58.87	23.030	S. 11 45 9.7	94.93
TUESDAY 2.					THURSDAY 4.				
	h m s	s	N. ° ' "	"		h m s	s	S. ° ' "	"
0	13 16 55.58	21.784	S. 3 25 8.0	113.63	0	15 4 17.15	23.063	S. 11 54 37.3	94.26
1	13 19 6.34	21.803	3 36 29.4	113.50	1	15 6 35.62	23.095	12 4 0.8	93.57
2	13 21 17.21	21.822	3 47 50.0	113.35	2	15 8 54.29	23.128	12 13 20.1	92.87
3	13 23 28.20	21.842	3 59 9.6	113.19	3	15 11 13.16	23.161	12 22 35.2	92.17
4	13 25 39.31	21.862	4 10 28.3	113.03	4	15 13 32.22	23.193	12 31 46.1	91.45
5	13 27 50.54	21.883	4 21 46.0	112.85	5	15 15 51.48	23.227	12 40 52.6	90.73
6	13 30 1.90	21.903	4 33 2.5	112.65	6	15 18 10.94	23.260	12 49 54.8	89.98
7	13 32 13.38	21.924	4 44 17.8	112.44	7	15 20 30.60	23.293	12 58 52.4	89.23
8	13 34 24.99	21.946	4 55 31.8	112.23	8	15 22 50.46	23.327	13 7 45.5	88.48
9	13 36 36.73	21.968	5 6 44.6	112.01	9	15 25 10.52	23.360	13 16 34.1	87.70
10	13 38 48.60	21.990	5 17 55.9	111.77	10	15 27 30.78	23.393	13 25 17.9	86.91
11	13 41 0.61	22.013	5 29 5.8	111.52	11	15 29 51.24	23.427	13 33 57.0	86.12
12	13 43 12.75	22.035	5 40 14.1	111.26	12	15 32 11.90	23.461	13 42 31.3	85.32
13	13 45 25.03	22.059	5 51 20.9	110.99	13	15 34 32.77	23.494	13 51 0.8	84.50
14	13 47 37.46	22.083	6 2 26.0	110.70	14	15 36 53.83	23.527	13 59 25.3	83.67
15	13 49 50.02	22.107	6 13 29.3	110.41	15	15 39 15.09	23.560	14 7 44.8	82.83
16	13 52 2.74	22.132	6 24 30.9	110.11	16	15 41 36.55	23.594	14 15 59.3	81.98
17	13 54 15.60	22.156	6 35 30.6	109.78	17	15 43 58.22	23.628	14 24 8.6	81.13
18	13 56 28.61	22.181	6 46 28.3	109.46	18	15 46 20.08	23.660	14 32 12.8	80.26
19	13 58 41.77	22.206	6 57 24.1	109.12	19	15 48 42.14	23.693	14 40 11.7	79.38
20	14 0 55.08	22.232	7 8 17.7	108.76	20	15 51 4.40	23.727	14 48 5.3	78.48
21	14 3 8.55	22.258	7 19 9.2	108.41	21	15 53 26.86	23.759	14 55 53.5	77.58
22	14 5 22.18	22.284	7 29 58.6	108.03	22	15 55 49.51	23.793	15 3 36.3	76.68
23	14 7 35.96	22.310	7 40 45.6	107.63	23	15 58 12.37	23.826	15 11 13.6	75.76
24	14 9 49.90	22.338	S. 7 51 30.2	107.24	24	16 0 35.42	23.858	S. 15 18 45.4	74.83

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
FRIDAY 5.					SUNDAY 7.				
	h m s	s	S. ° ' "	"		h m s	s	S. ° ' "	"
0	16 0 35.42	23 858	S. 15 18 45.4	74.83	0	17 58 18.13	25.011	S. 19 14 4.7	20.48
1	16 2 58.67	23 891	15 26 11.5	73.88	1	18 0 48.23	25.022	19 16 3.7	19.20
2	16 5 22.11	23 923	15 33 32.0	72.94	2	18 3 18.39	25.032	19 17 55.1	17.93
3	16 7 45.74	23 955	15 40 46.8	71.98	3	18 5 48.61	25.040	19 19 38.8	16.65
4	16 10 9.57	23.988	15 47 55.7	71.00	4	18 8 18.87	25.048	19 21 14.9	15.37
5	16 12 33.59	24 019	15 54 58.8	70.02	5	18 10 49.18	25.056	19 22 43.2	14.07
6	16 14 57.80	24 051	16 1 56.0	69.04	6	18 13 19.54	25.063	19 24 3.7	12.78
7	16 17 22.20	24.082	16 8 47.3	68.04	7	18 15 49.93	25.068	19 25 16.6	11.50
8	16 19 46.78	24.113	16 15 32.5	67.03	8	18 18 20.35	25.073	19 26 21.7	10.21
9	16 22 11.55	24.144	16 22 11.6	66.01	9	18 20 50.80	25.078	19 27 19.1	8.92
10	16 24 36.51	24.175	16 28 44.6	64.98	10	18 23 21.28	25.081	19 28 8.7	7.62
11	16 27 1.65	24 205	16 35 11.4	63.95	11	18 25 51.77	25.083	19 28 50.5	6.33
12	16 29 26.97	24.235	16 41 32.0	62.91	12	18 28 22.28	25.086	19 29 24.6	5.03
13	16 31 52.47	24.265	16 47 46.3	61.86	13	18 30 52.80	25.087	19 29 50.8	3.73
14	16 34 18.15	24.294	16 53 54.3	60.79	14	18 33 23.32	25.087	19 30 9.3	2.43
15	16 36 44.00	24.323	16 59 55.8	59.72	15	18 35 53.84	25.087	19 30 20.0	1.14
16	16 39 10.03	24.353	17 5 50.9	58.64	16	18 38 24.36	25.086	19 30 23.0	0.16
17	16 41 36.23	24.381	17 11 39.5	57.55	17	18 40 54.87	25.084	19 30 18.1	1.46
18	16 44 2.60	24.408	17 17 21.5	56.46	18	18 43 25.37	25.081	19 30 5.5	2.75
19	16 46 29.13	24.436	17 22 57.0	55.36	19	18 45 55.84	25.078	19 29 45.1	4.05
20	16 48 55.83	24.463	17 28 25.8	54.24	20	18 48 26.30	25.073	19 29 16.9	5.35
21	16 51 22.69	24.490	17 33 47.9	53.13	21	18 50 56.72	25.068	19 28 40.9	6.64
22	16 53 49.71	24.517	17 39 3.3	52.00	22	18 53 27.11	25.063	19 27 57.2	7.93
23	16 56 16.89	24.543	S. 17 44 11.9	50.86	23	18 55 57.47	25.056	S. 19 27 5.8	9.22
SATURDAY 6.					MONDAY 8.				
	h m s	s	S. ° ' "	"		h m s	s	S. ° ' "	"
0	16 58 44.22	24.568	S. 17 49 13.6	49.71	0	18 58 27.78	25.048	S. 19 26 6.6	10.51
1	17 1 11.70	24.593	17 54 8.4	48.57	1	19 0 58.04	25.039	19 24 59.7	11.80
2	17 3 39.33	24.618	17 58 56.4	47.41	2	19 3 28.25	25.031	19 23 45.0	13.08
3	17 6 7.11	24.642	18 3 37.3	46.24	3	19 5 58.41	25.021	19 22 22.7	14.37
4	17 8 35.03	24.665	18 8 11.3	45.08	4	19 8 28.50	25.010	19 20 52.6	15.65
5	17 11 3.09	24.688	18 12 38.3	43.90	5	19 10 58.53	24.999	19 19 14.9	16.92
6	17 13 31.28	24.710	18 16 58.1	42.71	6	19 13 28.49	24.988	19 17 29.6	18.19
7	17 15 59.61	24.733	18 21 10.8	41.53	7	19 15 58.38	24.974	19 15 36.6	19.47
8	17 18 28.07	24.754	18 25 16.4	40.33	8	19 18 28.18	24.960	19 13 36.0	20.74
9	17 20 56.66	24.775	18 29 14.8	39.13	9	19 20 57.90	24.946	19 11 27.7	22.01
10	17 23 25.37	24.795	18 33 5.9	37.92	10	19 23 27.53	24.931	19 9 11.9	23.26
11	17 25 54.20	24.814	18 36 49.8	36.71	11	19 25 57.07	24.915	19 6 48.6	24.51
12	17 28 23.14	24.833	18 40 26.4	35.48	12	19 28 26.51	24.898	19 4 17.8	25.77
13	17 30 52.20	24.852	18 43 55.6	34.25	13	19 30 55.84	24.880	19 1 39.4	27.02
14	17 33 21.36	24.869	18 47 17.4	33.03	14	19 33 25.07	24.863	18 58 53.6	28.26
15	17 35 50.63	24.887	18 50 31.9	31.79	15	19 35 54.20	24.844	18 56 0.3	29.50
16	17 38 20.00	24.903	18 53 38.9	30.55	16	19 38 23.20	24.824	18 52 59.6	30.73
17	17 40 49.47	24.920	18 56 38.5	29.31	17	19 40 52.09	24.805	18 49 51.5	31.96
18	17 43 19.04	24.935	18 59 30.6	28.06	18	19 43 20.86	24.784	18 46 36.1	33.18
19	17 45 48.69	24.948	19 2 15.2	26.81	19	19 45 49.50	24.762	18 43 13.3	34.40
20	17 48 18.42	24.963	19 4 52.3	25.55	20	19 48 18.00	24.739	18 39 43.3	35.61
21	17 50 48.24	24.976	19 7 21.8	24.28	21	19 50 46.37	24.717	18 36 6.0	36.82
22	17 53 18.13	24.988	19 9 43.7	23.02	22	19 53 14.60	24.693	18 32 21.5	38.01
23	17 55 48.10	25.000	19 11 58.0	21.75	23	19 55 42.69	24.669	18 28 29.9	39.20
24	17 58 18.13	25.011	S. 19 14 4.7	20.48	24	19 58 10.63	24.644	S. 18 24 31.1	40.39

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
TUESDAY 9.					THURSDAY 11.				
	h m s	s				h m s	s		
0	19 58 10.63	24.644	S. 18 24 31.1	40.39	0	21 52 41.91	22.950	S. 13 9 57.3	86.89
1	20 0 38.42	24.619	18 20 25.2	41.58	1	21 54 59.49	22.909	13 1 13.8	87.60
2	20 3 6.06	24.593	18 16 12.2	42.74	2	21 57 16.82	22.868	12 52 26.1	88.30
3	20 5 33.53	24.566	18 11 52.3	43.90	3	21 59 33.91	22.828	12 43 34.2	88.99
4	20 8 0.85	24.539	18 7 25.4	45.07	4	22 1 50.76	22.788	12 34 38.2	89.67
5	20 10 28.00	24.511	18 2 51.5	46.22	5	22 4 7.37	22.748	12 25 38.2	90.33
6	20 12 54.98	24.483	17 58 10.8	47.36	6	22 6 23.73	22.707	12 16 34.3	90.98
7	20 15 21.79	24.454	17 53 23.2	48.50	7	22 8 39.85	22.667	12 7 26.5	91.62
8	20 17 48.43	24.425	17 48 28.8	49.63	8	22 10 55.73	22.626	11 58 14.9	92.25
9	20 20 14.89	24.394	17 43 27.7	50.74	9	22 13 11.36	22.586	11 48 59.5	92.88
10	20 22 41.16	24.363	17 38 19.9	51.85	10	22 15 26.76	22.546	11 39 40.4	93.48
11	20 25 7.25	24.333	17 33 5.5	52.96	11	22 17 41.91	22.506	11 30 17.8	94.06
12	20 27 33.16	24.302	17 27 44.4	54.06	12	22 19 56.83	22.466	11 20 51.7	94.64
13	20 29 58.87	24.269	17 22 16.8	55.14	13	22 22 11.50	22.426	11 11 22.1	95.22
14	20 32 24.39	24.237	17 16 42.7	56.22	14	22 24 25.94	22.387	11 1 49.1	95.78
15	20 34 49.71	24.203	17 11 2.2	57.28	15	22 26 40.14	22.347	10 52 12.8	96.32
16	20 37 14.83	24.170	17 5 15.3	58.35	16	22 28 54.10	22.308	10 42 33.3	96.85
17	20 39 39.75	24.137	16 59 22.0	59.40	17	22 31 7.83	22.268	10 32 50.6	97.38
18	20 42 4.47	24.103	16 53 22.5	60.43	18	22 33 21.32	22.228	10 23 4.7	97.89
19	20 44 28.98	24.068	16 47 16.8	61.47	19	22 35 34.57	22.189	10 13 15.9	98.38
20	20 46 53.29	24.033	16 41 4.9	62.49	20	22 37 47.59	22.151	10 3 24.1	98.88
21	20 49 17.38	23.998	16 34 46.9	63.51	21	22 40 0.38	22.113	9 53 29.3	99.36
22	20 51 41.26	23.962	16 28 22.8	64.52	22	22 42 12.94	22.074	9 43 31.8	99.82
23	20 54 4.92	23.926	S. 16 21 52.7	65.51	23	22 44 25.27	22.037	S. 9 33 31.5	100.28
WEDNESDAY 10.					FRIDAY 12.				
	h m s	s				h m s	s		
0	20 56 28.37	23.889	S. 16 15 16.7	66.48	0	22 46 37.38	21.998	S. 9 23 28.5	100.72
1	20 58 51.59	23.853	16 8 34.9	67.46	1	22 48 49.25	21.960	9 13 22.9	101.14
2	21 1 14.60	23.816	16 1 47.2	68.43	2	22 51 0.90	21.923	9 3 14.8	101.57
3	21 3 37.38	23.778	15 54 53.8	69.38	3	22 53 12.32	21.885	8 53 4.1	101.98
4	21 5 59.94	23.741	15 47 54.7	70.32	4	22 55 23.52	21.848	8 42 51.1	102.37
5	21 8 22.27	23.703	15 40 50.0	71.25	5	22 57 34.50	21.812	8 32 35.7	102.75
6	21 10 44.37	23.664	15 33 39.7	72.18	6	22 59 45.26	21.775	8 22 18.1	103.13
7	21 13 6.24	23.626	15 26 23.8	73.09	7	23 1 55.80	21.738	8 11 58.2	103.49
8	21 15 27.88	23.588	15 19 2.6	73.98	8	23 4 6.12	21.703	8 1 36.2	103.84
9	21 17 49.29	23.549	15 11 36.0	74.88	9	23 6 16.23	21.667	7 51 12.1	104.18
10	21 20 10.47	23.510	15 4 4.1	75.76	10	23 8 26.12	21.631	7 40 46.1	104.50
11	21 22 31.41	23.471	14 56 26.9	76.63	11	23 10 35.80	21.596	7 30 18.1	104.83
12	21 24 52.12	23.432	14 48 44.6	77.48	12	23 12 45.27	21.561	7 19 48.2	105.13
13	21 27 12.59	23.392	14 40 57.2	78.33	13	23 14 54.53	21.526	7 9 16.5	105.43
14	21 29 32.82	23.352	14 33 4.7	79.17	14	23 17 3.58	21.492	6 58 43.1	105.71
15	21 31 52.81	23.313	14 25 7.2	79.98	15	23 19 12.43	21.458	6 48 8.0	105.98
16	21 34 12.57	23.273	14 17 4.9	80.79	16	23 21 21.07	21.424	6 37 31.3	106.24
17	21 36 32.08	23.232	14 8 57.7	81.60	17	23 23 29.52	21.391	6 26 53.1	106.48
18	21 38 51.35	23.193	14 0 45.7	82.39	18	23 25 37.76	21.357	6 16 13.5	106.73
19	21 41 10.39	23.153	13 52 29.0	83.18	19	23 27 45.80	21.324	6 5 32.4	106.97
20	21 43 29.18	23.112	13 44 7.6	83.94	20	23 29 53.65	21.293	5 54 49.9	107.18
21	21 45 47.73	23.071	13 35 41.7	84.69	21	23 32 1.31	21.260	5 44 6.2	107.38
22	21 48 6.03	23.030	13 27 11.3	85.43	22	23 34 8.77	21.228	5 33 21.3	107.58
23	21 50 24.09	22.990	13 18 36.5	86.17	23	23 36 16.04	21.197	5 22 35.2	107.77
24	21 52 41.91	22.950	S. 13 9 57.3	86.89	24	23 38 23.13	21.166	S. 5 11 48.1	107.94

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
SATURDAY 13.					MONDAY 15.				
	h m s	s				h m s	s		
0	23 38 23.13	21.166	S. 5 11 48.1	107.94	0	1 17 6.03	20.116	N. 3 27 58.8	105.17
1	23 40 30.03	21.135	5 0 59.9	108.12	1	1 19 6.69	20.103	3 38 29.0	104.90
2	23 42 36.75	21.104	4 50 10.7	108.27	2	1 21 7.27	20.091	3 48 57.6	104.63
3	23 44 43.28	21.073	4 39 20.7	108.41	3	1 23 7.78	20.080	3 59 24.5	104.35
4	23 46 49.63	21.044	4 28 29.8	108.54	4	1 25 8.23	20.069	4 9 49.8	104.07
5	23 48 55.81	21.015	4 17 38.2	108.67	5	1 27 8.61	20.058	4 20 13.3	103.77
6	23 51 1.81	20.986	4 6 45.8	108.78	6	1 29 8.92	20.047	4 30 35.0	103.46
7	23 53 7.64	20.958	3 55 52.8	108.88	7	1 31 9.17	20.038	4 40 54.8	103.15
8	23 55 13.30	20.929	3 44 59.2	108.98	8	1 33 9.37	20.028	4 51 12.8	102.84
9	23 57 18.79	20.901	3 34 5.1	109.07	9	1 35 9.51	20.019	5 1 28.9	102.52
10	23 59 24.11	20.873	3 23 10.4	109.14	10	1 37 9.60	20.010	5 11 43.0	102.18
11	0 1 29.27	20.847	3 12 15.4	109.19	11	1 39 9.63	20.002	5 21 55.1	101.85
12	0 3 34.27	20.820	3 1 20.1	109.25	12	1 41 9.62	19.993	5 32 5.2	101.51
13	0 5 39.11	20.793	2 50 24.4	109.30	13	1 43 9.55	19.985	5 42 13.2	101.16
14	0 7 43.79	20.767	2 39 28.5	109.33	14	1 45 9.44	19.978	5 52 19.1	100.79
15	0 9 48.31	20.742	2 28 32.4	109.36	15	1 47 9.29	19.972	6 2 22.7	100.43
16	0 11 52.69	20.717	2 17 36.2	109.37	16	1 49 9.10	19.965	6 12 24.2	100.07
17	0 13 56.91	20.691	2 6 40.0	109.38	17	1 51 8.87	19.958	6 22 23.5	99.68
18	0 16 0.98	20.667	1 55 43.7	109.37	18	1 53 8.60	19.953	6 32 20.4	99.30
19	0 18 4.91	20.643	1 44 47.6	109.35	19	1 55 8.30	19.947	6 42 15.1	98.91
20	0 20 8.69	20.619	1 33 51.5	109.34	20	1 57 7.96	19.941	6 52 7.3	98.51
21	0 22 12.34	20.596	1 22 55.5	109.31	21	1 59 7.59	19.937	7 1 57.2	98.12
22	0 24 15.84	20.573	1 11 59.8	109.26	22	2 1 7.20	19.933	7 11 44.7	97.70
23	0 26 19.21	20.550	S. 1 1 4.4	109.21	23	2 3 6.78	19.928	N. 7 21 29.6	97.28
SUNDAY 14.					TUESDAY 16.				
0	0 28 22.44	20.528	S. 0 50 9.3	109.15	0	2 5 6.34	19.925	N. 7 31 12.1	96.87
1	0 30 25.55	20.507	0 39 14.6	109.08	1	2 7 5.88	19.921	7 40 52.0	96.43
2	0 32 28.52	20.485	0 28 20.3	109.01	2	2 9 5.39	19.918	7 50 29.3	96.00
3	0 34 31.37	20.464	0 17 26.5	108.92	3	2 11 4.89	19.915	8 0 4.0	95.56
4	0 36 34.09	20.443	S. 0 6 33.3	108.83	4	2 13 4.37	19.913	8 9 36.0	95.12
5	0 38 36.69	20.423	N. 0 4 19.4	108.73	5	2 15 3.84	19.910	8 19 5.4	94.67
6	0 40 39.17	20.403	0 15 11.4	108.60	6	2 17 3.29	19.908	8 28 32.0	94.20
7	0 42 41.53	20.384	0 26 2.6	108.48	7	2 19 2.74	19.908	8 37 55.8	93.74
8	0 44 43.78	20.365	0 36 53.2	108.36	8	2 21 2.18	19.906	8 47 16.9	93.28
9	0 46 45.91	20.346	0 47 42.9	108.22	9	2 23 1.61	19.905	8 56 35.1	92.79
10	0 48 47.93	20.328	0 58 31.8	108.07	10	2 25 1.04	19.905	9 5 50.4	92.32
11	0 50 49.85	20.311	1 9 19.7	107.92	11	2 27 0.47	19.904	9 15 2.9	91.83
12	0 52 51.66	20.293	1 20 6.8	107.76	12	2 28 59.89	19.904	9 24 12.4	91.33
13	0 54 53.37	20.277	1 30 52.8	107.58	13	2 30 59.32	19.905	9 33 18.9	90.83
14	0 56 54.98	20.260	1 41 37.7	107.40	14	2 32 58.75	19.906	9 42 22.4	90.33
15	0 58 56.49	20.243	1 52 21.6	107.22	15	2 34 58.19	19.907	9 51 22.9	89.83
16	1 0 57.90	20.228	2 3 4.3	107.02	16	2 36 57.63	19.908	10 0 20.3	89.31
17	1 2 59.22	20.213	2 13 45.8	106.81	17	2 38 57.08	19.909	10 9 14.6	88.79
18	1 5 0.45	20.198	2 24 26.0	106.60	18	2 40 56.54	19.912	10 18 5.8	88.27
19	1 7 1.59	20.183	2 35 5.0	106.38	19	2 42 56.02	19.914	10 26 53.8	87.73
20	1 9 2.64	20.168	2 45 42.6	106.15	20	2 44 55.51	19.916	10 35 38.6	87.20
21	1 11 3.61	20.155	2 56 18.8	105.92	21	2 46 55.01	19.919	10 44 20.2	86.66
22	1 13 4.50	20.141	3 6 53.6	105.68	22	2 48 54.54	19.923	10 52 58.5	86.11
23	1 15 5.30	20.128	3 17 27.0	105.43	23	2 50 54.08	19.925	11 1 33.5	85.56
24	1 17 6.03	20.116	N. 3 27 58.8	105.17	24	2 52 53.64	19.929	N. 11 10 5.2	85.01

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
WEDNESDAY 17.					FRIDAY 19.				
	h m s	s	N. 11 10 5.2	85.01		h m s	s	N. 16 45 5.6	52.94
0	2 52 53.64	19.929	11 10 5.2	85.01	0	4 29 24.33	20.353	16 45 5.6	52.94
1	2 54 53.23	19.933	11 18 33.6	84.44	1	4 31 26.48	20.365	16 50 21.0	52.18
2	2 56 52.84	19.938	11 26 58.5	83.88	2	4 33 28.71	20.378	16 55 31.7	51.40
3	2 58 52.48	19.942	11 35 20.1	83.31	3	4 35 31.01	20.390	17 0 37.8	50.63
4	3 0 52.14	19.946	11 43 38.2	82.73	4	4 37 33.39	20.403	17 5 39.3	49.86
5	3 2 51.83	19.951	11 51 52.8	82.14	5	4 39 35.84	20.415	17 10 36.1	49.08
6	3 4 51.55	19.957	12 0 3.9	81.56	6	4 41 38.37	20.428	17 15 28.2	48.29
7	3 6 51.31	19.963	12 8 11.5	80.97	7	4 43 40.97	20.440	17 20 15.6	47.51
8	3 8 51.10	19.968	12 16 15.5	80.37	8	4 45 43.65	20.453	17 24 58.3	46.72
9	3 10 50.92	19.973	12 24 15.9	79.77	9	4 47 46.41	20.466	17 29 36.2	45.93
10	3 12 50.78	19.980	12 32 12.7	79.17	10	4 49 49.24	20.478	17 34 9.4	45.13
11	3 14 50.68	19.987	12 40 5.9	78.56	11	4 51 52.15	20.492	17 38 37.7	44.33
12	3 16 50.62	19.993	12 47 55.4	77.93	12	4 53 55.14	20.505	17 43 1.3	43.53
13	3 18 50.59	19.999	12 55 41.1	77.32	13	4 55 58.21	20.518	17 47 20.0	42.72
14	3 20 50.61	20.008	13 3 23.2	76.70	14	4 58 1.35	20.530	17 51 33.9	41.90
15	3 22 50.68	20.014	13 11 1.5	76.06	15	5 0 4.57	20.543	17 55 42.8	41.08
16	3 24 50.78	20.022	13 18 35.9	75.43	16	5 2 7.87	20.557	17 59 46.9	40.28
17	3 26 50.94	20.030	13 26 6.6	74.79	17	5 4 11.25	20.569	18 3 46.1	39.46
18	3 28 51.14	20.038	13 33 33.4	74.15	18	5 6 14.70	20.582	18 7 40.4	38.63
19	3 30 51.39	20.046	13 40 56.4	73.51	19	5 8 18.23	20.595	18 11 29.7	37.81
20	3 32 51.69	20.054	13 48 15.5	72.85	20	5 10 21.84	20.608	18 15 14.1	36.98
21	3 34 52.04	20.063	13 55 30.6	72.19	21	5 12 25.52	20.621	18 18 53.5	36.15
22	3 36 52.44	20.071	14 2 41.8	71.53	22	5 14 29.29	20.634	18 22 27.9	35.32
23	3 38 52.89	20.080	N. 14 9 49.0	70.87	23	5 16 33.13	20.647	N. 18 25 57.3	34.48
THURSDAY 18.					SATURDAY 20.				
	h m s	s	N. 14 16 52.2	70.20		h m s	s	N. 18 29 21.7	33.64
0	3 40 53.40	20.089	14 16 52.2	70.20	0	5 18 37.05	20.659	18 29 21.7	33.64
1	3 42 53.96	20.098	14 23 51.4	69.53	1	5 20 41.04	20.673	18 32 41.0	32.80
2	3 44 54.58	20.108	14 30 46.6	68.85	2	5 22 45.12	20.686	18 35 55.3	31.95
3	3 46 55.26	20.118	14 37 37.6	68.17	3	5 24 49.27	20.698	18 39 4.4	31.10
4	3 48 56.00	20.128	14 44 24.6	67.48	4	5 26 53.49	20.711	18 42 8.5	30.26
5	3 50 56.80	20.138	14 51 7.4	66.79	5	5 28 57.80	20.724	18 45 7.5	29.41
6	3 52 57.65	20.148	14 57 46.1	66.10	6	5 31 2.18	20.736	18 48 1.4	28.55
7	3 54 58.57	20.158	15 4 20.6	65.40	7	5 33 6.63	20.748	18 50 50.1	27.68
8	3 56 59.55	20.168	15 10 50.9	64.70	8	5 35 11.16	20.762	18 53 33.6	26.83
9	3 59 0.59	20.179	15 17 17.0	64.00	9	5 37 15.77	20.774	18 56 12.0	25.97
10	4 1 1.70	20.190	15 23 38.9	63.28	10	5 39 20.45	20.786	18 58 45.2	25.10
11	4 3 2.87	20.201	15 29 56.4	62.57	11	5 41 25.20	20.798	19 1 13.2	24.23
12	4 5 4.11	20.212	15 36 9.7	61.86	12	5 43 30.03	20.811	19 3 36.0	23.36
13	4 7 5.41	20.223	15 42 18.7	61.13	13	5 45 34.93	20.823	19 5 53.5	22.48
14	4 9 6.78	20.234	15 48 23.3	60.40	14	5 47 39.91	20.836	19 8 5.8	21.62
15	4 11 8.22	20.246	15 54 23.5	59.68	15	5 49 44.96	20.848	19 10 12.9	20.73
16	4 13 9.73	20.257	16 0 19.4	58.94	16	5 51 50.08	20.859	19 12 14.6	19.85
17	4 15 11.30	20.268	16 6 10.8	58.20	17	5 53 55.27	20.871	19 14 11.1	18.98
18	4 17 12.95	20.281	16 11 57.8	57.47	18	5 56 0.53	20.883	19 16 2.3	18.08
19	4 19 14.67	20.292	16 17 40.4	56.73	19	5 58 5.86	20.894	19 17 48.1	17.20
20	4 21 16.45	20.303	16 23 18.5	55.98	20	6 0 11.26	20.906	19 19 28.7	16.32
21	4 23 18.31	20.316	16 28 52.1	55.22	21	6 2 16.73	20.918	19 21 3.9	15.42
22	4 25 20.24	20.328	16 34 21.1	54.47	22	6 4 22.27	20.929	19 22 33.7	14.53
23	4 27 22.25	20.341	16 39 45.7	53.71	23	6 6 27.88	20.941	19 23 58.2	13.63
24	4 29 24.33	20.353	N. 16 45 5.6	52.94	24	6 8 33.56	20.952	N. 19 25 17.3	12.73

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
SUNDAY 21.					TUESDAY 23.				
	h m s	s	N. 19 25 17.3	12.73		h m s	s	N. 18 40 34.5	31.63
0	6 8 33.56	20.952	19 25 17.3	12.73	0	7 50 9.26	21.322	18 40 34.5	31.63
1	6 10 39.30	20.963	19 26 31.0	11.83	1	7 52 17.20	21.325	18 37 21.9	32.56
2	6 12 45.11	20.973	19 27 39.3	10.93	2	7 54 25.16	21.329	18 34 3.8	33.48
3	6 14 50.98	20.984	19 28 42.2	10.03	3	7 56 33.15	21.333	18 30 40.1	34.41
4	6 16 56.92	20.995	19 29 39.7	9.13	4	7 58 41.15	21.336	18 27 10.9	35.33
5	6 19 2.92	21.006	19 30 31.8	8.23	5	8 0 49.18	21.340	18 23 36.1	36.27
6	6 21 8.99	21.017	19 31 18.4	7.32	6	8 2 57.23	21.343	18 19 55.7	37.19
7	6 23 15.12	21.027	19 31 59.6	6.41	7	8 5 5.29	21.346	18 16 9.8	38.11
8	6 25 21.31	21.037	19 32 35.3	5.49	8	8 7 13.38	21.349	18 12 18.4	39.03
9	6 27 27.56	21.047	19 33 5.5	4.58	9	8 9 21.48	21.352	18 8 21.4	39.95
10	6 29 33.87	21.057	19 33 30.3	3.68	10	8 11 29.60	21.354	18 4 19.0	40.87
11	6 31 40.24	21.067	19 33 49.6	2.76	11	8 13 37.73	21.357	18 0 11.0	41.79
12	6 33 46.67	21.076	19 34 3.4	1.83	12	8 15 45.88	21.359	17 55 57.5	42.71
13	6 35 53.15	21.085	19 34 11.6	0.92	13	8 17 54.04	21.361	17 51 38.5	43.62
14	6 37 59.69	21.095	19 34 14.4	0.01	14	8 20 2.21	21.363	17 47 14.1	44.53
15	6 40 6.29	21.104	19 34 11.7	0.92	15	8 22 10.40	21.366	17 42 44.1	45.45
16	6 42 12.94	21.113	19 34 3.4	1.84	16	8 24 18.60	21.368	17 38 8.7	46.35
17	6 44 19.65	21.123	19 33 49.6	2.77	17	8 26 26.81	21.369	17 33 27.9	47.26
18	6 46 26.41	21.131	19 33 30.2	3.68	18	8 28 35.03	21.371	17 28 41.6	48.17
19	6 48 33.22	21.139	19 33 5.4	4.61	19	8 30 43.26	21.373	17 23 49.9	49.07
20	6 50 40.08	21.148	19 32 34.9	5.54	20	8 32 51.50	21.374	17 18 52.8	49.97
21	6 52 47.00	21.157	19 31 58.9	6.46	21	8 34 59.75	21.376	17 13 50.3	50.87
22	6 54 53.96	21.164	19 31 17.4	7.39	22	8 37 8.01	21.377	17 8 42.4	51.77
23	6 57 0.97	21.173	N. 19 30 30.2	8.33	23	8 39 16.27	21.378	N. 17 3 29.1	52.66
MONDAY 22.					WEDNESDAY 24.				
	h m s	s	N. 19 29 37.5	9.25		h m s	s	N. 16 58 10.5	53.55
0	6 59 8.03	21.181	19 29 37.5	9.25	0	8 41 24.54	21.379	16 58 10.5	53.55
1	7 1 15.14	21.188	19 28 39.2	10.18	1	8 43 32.82	21.380	16 52 46.5	54.44
2	7 3 22.29	21.195	19 27 35.4	11.11	2	8 45 41.10	21.381	16 47 17.2	55.33
3	7 5 29.48	21.203	19 26 25.9	12.04	3	8 47 49.39	21.383	16 41 42.6	56.22
4	7 7 36.72	21.211	19 25 10.9	12.97	4	8 49 57.69	21.383	16 36 2.6	57.10
5	7 9 44.01	21.218	19 23 50.3	13.91	5	8 52 5.99	21.383	16 30 17.4	57.97
6	7 11 51.33	21.224	19 22 24.0	14.84	6	8 54 14.29	21.384	16 24 27.0	58.84
7	7 13 58.70	21.232	19 20 52.2	15.77	7	8 56 22.60	21.385	16 18 31.3	59.73
8	7 16 6.11	21.238	19 19 14.8	16.70	8	8 58 30.91	21.386	16 12 30.3	60.59
9	7 18 13.55	21.244	19 17 31.8	17.63	9	9 0 39.23	21.387	16 6 24.2	61.45
10	7 20 21.04	21.251	19 15 43.2	18.57	10	9 2 47.55	21.387	16 0 12.9	62.32
11	7 22 28.56	21.256	19 13 49.0	19.51	11	9 4 55.87	21.387	15 53 56.4	63.18
12	7 24 36.11	21.263	19 11 49.1	20.44	12	9 7 4.19	21.387	15 47 34.7	64.04
13	7 26 43.71	21.268	19 9 43.7	21.37	13	9 9 12.51	21.388	15 41 7.9	64.88
14	7 28 51.33	21.273	19 7 32.7	22.31	14	9 11 20.84	21.388	15 34 36.1	65.73
15	7 30 58.99	21.279	19 5 16.0	23.24	15	9 13 29.17	21.388	15 27 59.1	66.58
16	7 33 6.68	21.284	19 2 53.8	24.18	16	9 15 37.49	21.388	15 21 17.1	67.42
17	7 35 14.40	21.290	19 0 25.9	25.11	17	9 17 45.82	21.388	15 14 30.1	68.26
18	7 37 22.16	21.295	18 57 52.5	26.03	18	9 19 54.15	21.389	15 7 38.0	69.10
19	7 39 29.94	21.299	18 55 13.5	26.97	19	9 22 2.49	21.389	15 0 40.9	69.93
20	7 41 37.75	21.304	18 52 28.9	27.91	20	9 24 10.82	21.388	14 53 38.9	70.75
21	7 43 45.59	21.308	18 49 38.6	28.84	21	9 26 19.15	21.389	14 46 31.9	71.58
22	7 45 53.45	21.313	18 46 42.8	29.77	22	9 28 27.49	21.390	14 39 20.0	72.39
23	7 48 1.34	21.318	18 43 41.4	30.69	23	9 30 35.83	21.389	14 32 3.2	73.21
24	7 50 9.26	21.322	N. 18 40 34.5	31.63	24	9 32 44.16	21.389	N. 14 24 41.5	74.02

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
THURSDAY 25.					SATURDAY 27.				
	h m s	s	N. 14 24 41.5	74.02		h m s	s	N. 7 6 43.7	105.92
0	9 32 44.16	21.389	14 17 15.0	74.82	0	11 15 33.92	21.506	6 56 6.7	106.41
1	9 34 52.50	21.390	14 9 43.7	75.62	1	11 17 42.97	21.513	6 45 26.8	106.88
2	9 37 0.84	21.391	14 2 7.6	76.41	2	11 19 52.07	21.520	6 34 44.1	107.35
3	9 39 9.19	21.391	13 54 26.8	77.20	3	11 22 1.21	21.527	6 23 58.6	107.81
4	9 41 17.53	21.390	13 46 41.2	77.99	4	11 24 10.39	21.533	6 13 10.4	108.25
5	9 43 25.87	21.391	13 38 50.9	78.77	5	11 26 19.61	21.541	6 2 19.6	108.68
6	9 45 34.22	21.392	13 30 56.0	79.55	6	11 28 28.88	21.549	5 51 26.2	109.12
7	9 47 42.57	21.392	13 22 56.3	80.33	7	11 30 38.20	21.558	5 40 30.2	109.54
8	9 49 50.92	21.393	13 14 52.1	81.08	8	11 32 47.57	21.565	5 29 31.7	109.95
9	9 51 59.28	21.393	13 6 43.3	81.84	9	11 34 56.98	21.573	5 18 30.8	110.35
10	9 54 7.64	21.393	12 58 30.0	82.59	10	11 37 6.45	21.583	5 7 27.5	110.74
11	9 56 16.00	21.393	12 50 12.2	83.34	11	11 39 15.98	21.593	4 56 21.9	111.12
12	9 58 24.36	21.394	12 41 49.9	84.09	12	11 41 25.56	21.601	4 45 14.1	111.49
13	10 0 32.73	21.396	12 33 23.1	84.83	13	11 43 35.19	21.611	4 34 4.0	111.86
14	10 2 41.11	21.397	12 24 52.0	85.56	14	11 45 44.89	21.621	4 22 51.8	112.21
15	10 4 49.49	21.397	12 16 16.4	86.29	15	11 47 54.64	21.631	4 11 37.5	112.55
16	10 6 57.87	21.398	12 7 36.5	87.01	16	11 50 4.46	21.642	4 0 21.2	112.88
17	10 9 6.26	21.399	11 58 52.3	87.72	17	11 52 14.34	21.653	3 49 3.0	113.19
18	10 11 14.66	21.401	11 50 3.9	88.43	18	11 54 24.29	21.663	3 37 42.9	113.51
19	10 13 23.07	21.403	11 41 11.2	89.13	19	11 56 34.30	21.674	3 26 20.9	113.82
20	10 15 31.49	21.403	11 32 14.3	89.83	20	11 58 44.38	21.687	3 14 57.1	114.10
21	10 17 39.91	21.404	11 23 13.2	90.53	21	12 0 54.54	21.698	3 3 31.7	114.38
22	10 19 48.34	21.407	11 14 8.0	91.20	22	12 3 4.76	21.710	2 52 4.6	114.65
23	10 21 56.79	21.408			23	12 5 15.06	21.723		
FRIDAY 26.					SUNDAY 28.				
0	10 24 5.24	21.410	10 55 45.5	92.55	0	12 7 25.44	21.736	N. 2 40 35.9	114.91
1	10 26 13.71	21.413	10 46 28.2	93.21	1	12 9 35.89	21.749	2 29 5.7	115.15
2	10 28 22.10	21.414	10 37 7.0	93.87	2	12 11 46.43	21.763	2 17 34.1	115.38
3	10 30 30.68	21.417	10 27 41.8	94.52	3	12 13 57.05	21.777	2 6 1.1	115.61
4	10 32 39.19	21.419	10 18 12.8	95.16	4	12 16 7.75	21.790	1 54 26.8	115.83
5	10 34 47.71	21.422	10 8 39.9	95.80	5	12 18 18.53	21.804	1 42 51.2	116.03
6	10 36 56.25	21.425	9 59 3.2	96.43	6	12 20 29.40	21.819	1 31 14.4	116.23
7	10 39 4.81	21.428	9 49 22.8	97.05	7	12 22 40.36	21.835	1 19 36.5	116.41
8	10 41 13.38	21.430	9 39 38.6	97.67	8	12 24 51.42	21.850	1 7 57.5	116.58
9	10 43 21.97	21.434	9 29 50.8	98.27	9	12 27 2.56	21.865	0 56 17.6	116.73
10	10 45 30.59	21.438	9 19 59.4	98.86	10	12 29 13.80	21.882	0 44 36.8	116.88
11	10 47 39.22	21.441	9 10 4.5	99.45	11	12 31 25.14	21.898	0 32 55.1	117.01
12	10 49 47.88	21.445	9 0 6.0	100.04	12	12 33 36.58	21.915	0 21 12.7	117.13
13	10 51 56.56	21.448	8 50 4.0	100.62	13	12 35 48.12	21.932	N. 0 9 29.5	117.25
14	10 54 5.26	21.453	8 39 58.6	101.18	14	12 37 59.76	21.948	S. 0 2 14.3	117.34
15	10 56 13.99	21.458	8 29 49.8	101.74	15	12 40 11.50	21.966	0 13 58.6	117.43
16	10 58 22.75	21.462	8 19 37.7	102.29	16	12 42 23.35	21.983	0 25 43.4	117.51
17	11 0 31.53	21.467	8 9 22.3	102.83	17	12 44 35.30	22.002	0 37 28.7	117.58
18	11 2 40.35	21.472	7 59 3.7	103.37	18	12 46 47.37	22.021	0 49 14.3	117.63
19	11 4 49.19	21.477	7 48 41.9	103.90	19	12 48 59.55	22.040	1 1 0.2	117.67
20	11 6 58.07	21.483	7 38 16.9	104.43	20	12 51 11.85	22.059	1 12 46.3	117.69
21	11 9 6.98	21.488	7 27 48.8	104.93	21	12 53 24.26	22.078	1 24 32.5	117.71
22	11 11 15.92	21.493	7 17 17.7	105.43	22	12 55 36.78	22.098	1 36 18.8	117.72
23	11 13 24.90	21.500			23	12 57 49.43	22.118	1 48 5.1	117.70
24	11 15 33.92	21.506	N. 7 6 43.7	105.92	24	13 0 2.20	22.138	S. 1 59 51.2	117.68

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.									
Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
MONDAY 29.					TUESDAY 30.				
	h m s	s	S. ° ' "	"		h m s	s	S. ° ' "	"
0	13 0 2.20	22.138	S. 1 59 51.2	117.68	0	13 53 49.68	22.715	S. 6 38 35.6	113.36
1	13 2 15.09	22.158	2 11 37.2	117.65	1	13 56 6.05	22.743	6 49 54.7	113.02
2	13 4 28.10	22.180	2 23 23.0	117.60	2	13 58 22.59	22.771	7 1 11.8	112.66
3	13 6 41.25	22.202	2 35 8.4	117.54	3	14 0 39.30	22.798	7 12 26.6	112.29
4	13 8 54.52	22.223	2 46 53.5	117.48	4	14 2 56.17	22.826	7 23 39.3	111.92
5	13 11 7.92	22.244	2 58 38.1	117.39	5	14 5 13.21	22.854	7 34 49.6	111.52
6	13 13 21.45	22.267	3 10 22.2	117.29	6	14 7 30.42	22.883	7 45 57.5	111.11
7	13 15 35.12	22.290	3 22 5.6	117.18	7	14 9 47.80	22.911	7 57 2.9	110.68
8	13 17 48.93	22.313	3 33 48.4	117.07	8	14 12 5.35	22.940	8 8 5.7	110.25
9	13 20 2.87	22.335	3 45 30.4	116.93	9	14 14 23.08	22.969	8 19 5.9	109.80
10	13 22 16.95	22.358	3 57 11.5	116.78	10	14 16 40.98	22.998	8 30 3.3	109.34
11	13 24 31.17	22.383	4 8 51.8	116.63	11	14 18 59.06	23.028	8 40 58.0	108.87
12	13 26 45.54	22.407	4 20 31.0	116.44	12	14 21 17.31	23.057	8 51 49.7	108.38
13	13 29 0.05	22.431	4 32 9.1	116.26	13	14 23 35.74	23.087	9 2 38.5	107.88
14	13 31 14.71	22.455	4 43 46.1	116.07	14	14 25 54.35	23.117	9 13 24.3	107.37
15	13 33 29.51	22.480	4 55 21.9	115.86	15	14 28 13.14	23.147	9 24 6.9	106.83
16	13 35 44.47	22.505	5 6 56.4	115.63	16	14 30 32.11	23.177	9 34 46.3	106.30
17	13 37 59.57	22.530	5 18 29.4	115.38	17	14 32 51.26	23.207	9 45 22.5	105.75
18	13 40 14.83	22.556	5 30 1.0	115.14	18	14 35 10.59	23.237	9 55 55.3	105.18
19	13 42 30.24	22.582	5 41 31.1	114.88	19	14 37 30.10	23.268	10 6 24.7	104.60
20	13 44 45.81	22.608	5 52 59.6	114.60	20	14 39 49.80	23.298	10 16 50.5	104.01
21	13 47 1.54	22.635	6 4 26.3	114.31	21	14 42 9.68	23.329	10 27 12.8	103.41
22	13 49 17.43	22.661	6 15 51.3	114.01	22	14 44 29.75	23.360	10 37 31.4	102.78
23	13 51 33.47	22.688	6 27 14.4	113.69	23	14 46 50.00	23.390	10 47 46.2	102.15
24	13 53 49.68	22.715	S. 6 38 35.6	113.36	24	14 49 10.43	23.421	S. 10 57 57.2	101.51

PHASES OF THE MOON.

				h m	
Sept.	5	☾	First Quarter	- - - - -	20 45.5
	12	○	Full Moon	- - - - -	19 0.0
	20	☾	Last Quarter	- - - - -	15 35.3
	28	●	New Moon	- - - - -	8 15.9
				h	
Sept.	6	☾	Perigee	- - - - -	19.0
	20	☾	Apogee	- - - - -	0.9

AT APPARENT NOON.

Date.	THE SUN'S				Sidereal Time of the Semi- diameter passing the Meridian.*	Equation of Time, to be subtracted from Apparent Time.	Var. in 1 hour.
	Apparent Right Ascension.	Var. in 1 hour.	Apparent Declination.	Var. in 1 hour.			
	h m s	s	° ' "	"	m s	m s	s
Wed.	1 12 29 26.24	9.056	S. 3 10 47.1	58.25	1 4.29	10 17.65	0.798
Thur.	2 12 33 3.73	9.068	3 34 4.0	58.15	1 4.33	10 36.67	0.786
Frid.	3 12 36 41.51	9.081	3 57 18.4	58.04	1 4.38	10 55.39	0.774
Sat.	4 12 40 19.60	9.094	4 20 30.0	57.92	1 4.43	11 13.80	0.760
Sun.	5 12 43 58.02	9.108	4 43 38.4	57.78	1 4.48	11 31.88	0.746
Mon.	6 12 47 36.79	9.123	5 6 43.2	57.62	1 4.54	11 49.61	0.731
Tues.	7 12 51 15.94	9.139	5 29 44.1	57.45	1 4.60	12 6.97	0.715
Wed.	8 12 54 55.48	9.156	5 52 40.7	57.26	1 4.66	12 23.91	0.698
Thur.	9 12 58 35.43	9.174	6 15 32.6	57.06	1 4.73	12 40.49	0.681
Frid.	10 13 2 15.81	9.192	6 38 19.5	56.84	1 4.80	12 56.62	0.662
Sat.	11 13 5 56.66	9.212	7 1 1.0	56.61	1 4.87	13 12.28	0.642
Sun.	12 13 9 37.99	9.233	7 23 36.8	56.36	1 4.94	13 27.46	0.622
Mon.	13 13 13 19.83	9.254	7 46 6.5	56.10	1 5.02	13 42.13	0.600
Tues.	14 13 17 2.19	9.276	8 8 29.8	55.83	1 5.09	13 56.28	0.578
Wed.	15 13 20 45.10	9.300	8 30 46.3	55.54	1 5.17	14 9.89	0.555
Thur.	16 13 24 28.58	9.324	8 52 55.6	55.23	1 5.26	14 22.92	0.531
Frid.	17 13 28 12.66	9.349	9 14 57.5	54.91	1 5.34	14 35.37	0.506
Sat.	18 13 31 57.34	9.375	9 36 51.4	54.57	1 5.43	14 47.21	0.480
Sun.	19 13 35 42.65	9.401	9 58 37.0	54.22	1 5.52	14 58.42	0.454
Mon.	20 13 39 28.60	9.429	10 20 13.9	53.85	1 5.61	15 8.99	0.427
Tues.	21 13 43 15.22	9.457	10 41 41.9	53.47	1 5.71	15 18.90	0.399
Wed.	22 13 47 2.52	9.485	11 3 0.4	53.06	1 5.80	15 28.13	0.370
Thur.	23 13 50 50.51	9.514	11 24 9.0	52.65	1 5.90	15 36.67	0.341
Frid.	24 13 54 39.21	9.544	11 45 7.5	52.21	1 6.00	15 44.50	0.311
Sat.	25 13 58 28.63	9.574	12 5 55.3	51.76	1 6.11	15 51.62	0.281
Sun.	26 14 2 18.78	9.605	12 26 32.1	51.29	1 6.21	15 58.00	0.251
Mon.	27 14 6 9.67	9.636	12 46 57.4	50.81	1 6.32	16 3.65	0.220
Tues.	28 14 10 1.31	9.668	13 7 10.8	50.30	1 6.43	16 8.54	0.188
Wed.	29 14 13 53.72	9.699	13 27 12.0	49.78	1 6.54	16 12.68	0.157
Thur.	30 14 17 46.88	9.731	13 47 0.4	49.24	1 6.65	16 16.06	0.125
Frid.	31 14 21 40.82	9.764	14 6 35.7	48.69	1 6.76	16 18.67	0.093
Sat.	32 14 25 35.53	9.796	S. 14 25 57.4	48.11	1 6.87	16 20.51	0.060

* Mean Time of the Semidiameter passing may be found by subtracting 0.18 from the Sidereal Time.

AT MEAN NOON.

		THE SUN'S			Equation of Time, to be subtracted from Apparent Time.	Sidereal Time.
		Apparent Right Ascension.	Apparent Declination.	Semi- diameter.*		
Date.						
		h m s	° ' "	' "	m s	h m s
Wed.	1	12 29 27.80	S. 3 10 57.1	16 0.41	10 17.79	12 39 45.59
Thur.	2	12 33 5.33	3 34 14.3	16 0.70	10 36.81	12 43 42.14
Frid.	3	12 36 43.16	3 57 29.0	16 0.98	10 55.53	12 47 38.69
Sat.	4	12 40 21.30	4 20 40.8	16 1.26	11 13.94	12 51 35.24
Sun.	5	12 43 59.77	4 43 49.5	16 1.55	11 32.02	12 55 31.79
Mon.	6	12 47 38.59	5 6 54.6	16 1.83	11 49.75	12 59 28.35
Tues.	7	12 51 17.79	5 29 55.7	16 2.11	12 7.11	13 3 24.90
Wed.	8	12 54 57.37	5 52 52.5	16 2.40	12 24.08	13 7 21.45
Thur.	9	12 58 37.37	6 15 44.6	16 2.68	12 40.64	13 11 18.00
Frid.	10	13 2 17.80	6 38 31.7	16 2.96	12 56.76	13 15 14.56
Sat.	11	13 5 58.69	7 1 13.5	16 3.24	13 12.42	13 19 11.11
Sun.	12	13 9 40.06	7 23 49.4	16 3.52	13 27.60	13 23 7.66
Mon.	13	13 13 21.94	7 46 19.3	16 3.80	13 42.27	13 27 4.21
Tues.	14	13 17 4.35	8 8 42.8	16 4.07	13 56.42	13 31 0.77
Wed.	15	13 20 47.30	8 30 59.4	16 4.35	14 10.02	13 34 57.32
Thur.	16	13 24 30.82	8 53 8.9	16 4.62	14 23.05	13 38 53.87
Frid.	17	13 28 14.93	9 15 10.8	16 4.89	14 35.49	13 42 50.42
Sat.	18	13 31 59.65	9 37 4.8	16 5.15	14 47.33	13 46 46.98
Sun.	19	13 35 45.00	9 58 50.5	16 5.42	14 58.54	13 50 43.53
Mon.	20	13 39 30.99	10 20 27.5	16 5.69	15 9.10	13 54 40.08
Tues.	21	13 43 17.64	10 41 55.5	16 5.95	15 19.00	13 58 36.64
Wed.	22	13 47 4.96	11 3 14.0	16 6.21	15 28.23	14 2 33.19
Thur.	23	13 50 52.98	11 24 22.7	16 6.47	15 36.76	14 6 29.74
Frid.	24	13 54 41.71	11 45 21.1	16 6.73	15 44.58	14 10 26.30
Sat.	25	13 58 31.16	12 6 8.9	16 6.99	15 51.69	14 14 22.85
Sun.	26	14 2 21.34	12 26 45.7	16 7.25	15 58.07	14 18 19.40
Mon.	27	14 6 12.25	12 47 11.0	16 7.52	16 3.71	14 22 15.96
Tues.	28	14 10 3.92	13 7 24.4	16 7.77	16 8.60	14 26 12.51
Wed.	29	14 13 56.34	13 27 25.4	16 8.03	16 12.73	14 30 9.06
Thur.	30	14 17 49.52	13 47 13.8	16 8.29	16 16.10	14 34 5.62
Frid.	31	14 21 43.47	14 6 48.9	16 8.55	16 18.70	14 38 2.17
Sat.	32	14 25 38.20	S. 14 26 10.5	16 8.81	16 20.53	14 41 58.73

* The Semidiameter for *Apparent* Noon may be assumed the same as that for *Mean* Noon.

MEAN TIME.

Day.	THE SUN'S <i>Apparent</i>		Logarithm of the Radius Vector of the Earth.	Transit of the First Point of Aries.	THE MOON'S			
	Longitude.	Latitude.			Semidiameter.		Horizontal Parallax.	
	Noon.	Noon.			Noon.	Midnight.	Noon.	Midnight.
				<div>h m s</div>				
1	188 1 13.7	N. 0.32	0.0003465	11 18 22.97	16 14.09	16 15.18	59 35.06	59 39.05
2	189 0 18.0	0.33	.0002193	11 14 27.07	16 15.61	16 15.41	59 40.61	59 39.89
3	189 59 24.2	0.30	0.0000915	11 10 31.16	16 14.65	16 13.38	59 37.09	59 32.43
4	190 58 32.1	0.24	9.9999634	11 6 35.26	16 11.67	16 9.58	59 26.16	59 18.50
5	191 57 41.8	0.15	.9998350	11 2 39.35	16 7.17	16 4.49	59 9.66	58 59.83
6	192 56 53.3	N. 0.03	.9997065	10 58 43.44	16 1.59	15 58.49	58 49.17	58 37.80
7	193 56 6.4	S. 0.09	9.9995782	10 54 47.54	15 55.23	15 51.82	58 25.83	58 13.32
8	194 55 21.4	0.22	.9994502	10 50 51.63	15 48.28	15 44.62	58 0.33	57 46.88
9	195 54 38.1	0.36	.9993227	10 46 55.72	15 40.84	15 36.96	57 33.02	57 18.77
10	196 53 56.8	0.49	9.9991958	10 42 59.82	15 32.98	15 28.93	57 4.18	56 49.29
11	197 53 17.3	0.61	.9990696	10 39 3.91	15 24.81	15 20.67	56 34.20	56 18.99
12	198 52 39.8	0.70	.9989441	10 35 8.01	15 16.53	15 12.43	56 3.79	55 48.75
13	199 52 4.3	0.76	9.9988195	10 31 12.10	15 8.42	15 4.55	55 34.03	55 19.82
14	200 51 31.0	0.80	.9986957	10 27 16.19	15 0.87	14 57.44	55 6.32	54 53.75
15	201 50 59.7	0.82	.9985728	10 23 20.29	14 54.33	14 51.58	54 42.30	54 32.21
16	202 50 30.7	0.81	9.9984507	10 19 24.38	14 49.25	14 47.40	54 23.67	54 16.89
17	203 50 3.8	0.77	.9983294	10 15 28.47	14 46.09	14 45.34	54 12.06	54 9.33
18	204 49 39.2	0.71	.9982088	10 11 32.56	14 45.22	14 45.74	54 8.87	54 10.80
19	205 49 16.8	0.62	9.9980890	10 7 36.66	14 46.94	14 48.84	54 15.21	54 22.17
20	206 48 56.7	0.52	.9979697	10 3 40.75	14 51.44	14 54.74	54 31.70	54 43.81
21	207 48 38.9	0.41	.9978511	9 59 44.84	14 58.72	15 3.37	54 58.44	55 15.51
22	208 48 23.3	0.30	9.9977330	9 55 48.94	15 8.64	15 14.48	55 34.85	55 56.26
23	209 48 10.0	0.17	.9976154	9 51 53.03	15 20.80	15 27.53	56 19.47	56 44.15
24	210 47 58.9	S. 0.04	.9974981	9 47 57.12	15 34.54	15 41.72	57 9.90	57 36.24
25	211 47 50.0	N. 0.07	9.9973812	9 44 1.21	15 48.92	15 55.99	58 2.66	58 28.63
26	212 47 43.3	0.16	.9972645	9 40 5.31	16 2.77	16 9.10	58 53.52	59 16.73
27	213 47 38.6	0.23	.9971479	9 36 9.40	16 14.81	16 19.77	59 37.70	59 55.88
28	214 47 36.0	0.27	9.9970315	9 32 13.49	16 23.84	16 26.93	60 10.82	60 22.16
29	215 47 35.2	0.28	.9969152	9 28 17.58	16 28.97	16 29.95	60 29.67	60 33.27
30	216 47 36.3	0.26	.9967992	9 24 21.67	16 29.88	16 28.79	60 32.98	60 28.99
31	217 47 39.1	0.20	.9966835	9 20 25.76	16 26.77	16 23.91	60 21.57	60 11.11
32	218 47 43.5	N. 0.12	9.9965682	9 16 29.86	16 20.35	16 16.20	59 58.02	59 42.80

MEAN TIME.

Day.	THE MOON'S						
	Longitude.		Latitude.		Age.	Meridian Passage.	
	Noon.	Midnight.	Noon.	Midnight.	Noon.	Upper.	Lower.
1	223° 11' 34".7	230° 25' 3".9	N. 5° 4' 8".3	N. 5° 7' 37".6	d 2.66	h m 2 14.3	h m 14 41.8
2	237 38 52.0	244 52 18.2	5 6 12.9	4 59 56.0	3.66	3 9.7	15 38.1
3	252 4 45.9	259 15 43.6	4 48 54.7	4 33 22.5	4.66	4 6.9	16 36.0
4	266 24 45.8	273 31 32.5	4 13 37.8	3 50 3.3	5.66	5 5.2	17 34.4
5	280 35 49.3	287 37 26.6	3 23 5.2	2 53 12.3	6.66	6 3.5	18 32.4
6	294 36 19.1	301 32 24.4	2 20 55.3	1 46 46.1	7.66	7 0.8	19 28.7
7	308 25 42.4	315 16 14.4	N. 1 11 17.7	N. 0 35 2.6	8.66	7 56.1	20 22.8
8	322 4 2.0	328 49 6.5	S. 0 1 26.4	S. 0 37 37.7	9.66	8 48.8	21 14.3
9	335 31 28.5	342 11 7.3	1 13 0.8	1 47 6.9	10.66	9 39.1	22 3.5
10	348 48 1.3	355 22 7.3	2 19 29.2	2 49 43.5	11.66	10 27.3	22 50.8
11	1 53 21.6	8 21 39.7	3 17 28.2	3 42 24.4	12.66	11 14.0	23 36.9
12	14 46 57.1	21 9 9.9	4 4 17.0	4 22 53.6	13.66	11 59.7	* *
13	27 28 15.3	33 44 12.2	4 38 5.2	4 49 46.1	14.66	12 44.9	0 22.3
14	39 57 2.2	46 6 49.2	4 57 53.4	5 2 26.9	15.66	13 30.3	1 7.6
15	52 13 40.4	58 17 46.8	5 3 28.9	5 1 3.6	16.66	14 16.1	1 53.1
16	64 19 22.5	70 18 45.7	4 55 17.0	4 46 16.5	17.66	15 2.5	2 39.2
17	76 16 18.0	82 12 24.6	4 34 10.8	4 19 9.3	18.66	15 49.6	3 26.0
18	88 7 34.0	94 2 17.7	4 1 22.2	3 41 0.1	19.66	16 37.3	4 13.4
19	99 57 10.0	105 52 47.3	3 18 14.4	2 53 17.0	20.66	17 25.3	5 1.3
20	111 49 48.1	117 48 52.2	2 26 20.1	1 57 37.2	21.66	18 13.4	5 49.3
21	123 50 40.3	129 55 53.0	1 27 22.6	S. 0 55 51.6	22.66	19 1.5	6 37.5
22	136 5 10.2	142 19 10.4	S. 0 23 21.3	N. 0 9 49.3	23.66	19 49.6	7 25.5
23	148 38 29.2	155 3 38.6	N. 0 43 19.4	1 16 45.5	24.66	20 37.9	8 13.7
24	161 35 5.4	168 13 9.6	1 49 42.1	2 21 40.8	25.66	21 26.6	9 2.2
25	174 58 3.5	181 49 50.0	2 52 11.4	3 20 41.6	26.66	22 16.5	9 51.4
26	188 48 21.4	195 53 19.1	3 46 38.5	4 9 28.8	27.66	23 7.9	10 42.0
27	203 4 12.5	210 20 19.8	4 28 40.9	4 43 45.6	28.66	* *	11 34.5
28	217 40 49.2	225 4 40.6	4 54 18.5	5 0 0.6	0.21	0 1.6	12 29.3
29	232 30 47.6	239 58 1.3	5 0 40.0	4 56 12.8	1.21	0 57.7	13 26.7
30	247 25 12.8	254 51 16.5	4 46 42.9	4 32 22.5	2.21	1 56.3	14 26.2
31	262 15 12.7	269 36 10.2	4 13 30.4	3 50 32.0	3.21	2 56.4	15 26.6
32	276 53 27.2	284 6 31.9	N. 3 23 57.4	N. 2 54 19.9	4.21	3 56.8	16 26.6

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
WEDNESDAY 1.					FRIDAY 3.				
	h m s	s	S. 10 57 57.2	101.51		h m s	s	S. 17 28 22.0	57.03
0	14 49 10.43	23.421	11 8 4.3	100.86	0	16 44 59.93	24.753	17 34 0.7	55.87
1	14 51 31.05	23.452	11 18 7.5	100.19	1	16 47 28.51	24.773	17 39 32.4	54.70
2	14 53 51.85	23.483	11 28 6.6	99.50	2	16 49 57.21	24.793	17 44 57.1	53.53
3	14 56 12.84	23.514	11 38 1.5	98.81	3	16 52 26.02	24.810	17 50 14.7	52.33
4	14 58 34.02	23.545	11 47 52.3	98.11	4	16 54 54.93	24.828	17 55 25.1	51.14
5	15 0 55.38	23.576	11 57 38.8	97.38	5	16 57 23.96	24.847	18 0 28.4	49.95
6	15 3 16.93	23.607	12 7 20.9	96.65	6	16 59 53.09	24.863	18 5 24.5	48.74
7	15 5 38.66	23.638	12 16 58.6	95.91	7	17 2 22.32	24.880	18 10 13.3	47.53
8	15 8 0.58	23.669	12 26 31.8	95.15	8	17 4 51.65	24.895	18 14 54.8	46.31
9	15 10 22.69	23.700	12 36 0.4	94.38	9	17 7 21.06	24.910	18 19 29.0	45.09
10	15 12 44.98	23.730	12 45 24.3	93.60	10	17 9 50.57	24.925	18 23 55.9	43.87
11	15 15 7.45	23.761	12 54 43.6	92.81	11	17 12 20.16	24.939	18 28 15.4	42.63
12	15 17 30.11	23.792	13 3 58.0	92.00	12	17 14 49.84	24.953	18 32 27.4	41.38
13	15 19 52.95	23.823	13 13 7.6	91.18	13	17 17 19.59	24.965	18 36 32.0	40.14
14	15 22 15.98	23.853	13 22 12.2	90.35	14	17 19 49.42	24.978	18 40 29.1	38.89
15	15 24 39.19	23.884	13 31 11.8	89.52	15	17 22 19.32	24.988	18 44 18.7	37.64
16	15 27 2.59	23.914	13 40 6.4	88.67	16	17 24 49.28	24.999	18 48 0.8	36.38
17	15 29 26.16	23.944	13 48 55.8	87.79	17	17 27 19.31	25.010	18 51 35.3	35.13
18	15 31 49.92	23.975	13 57 39.9	86.92	18	17 29 49.40	25.019	18 55 2.3	33.86
19	15 34 13.86	24.004	14 6 18.8	86.03	19	17 32 19.54	25.028	18 58 21.6	32.58
20	15 36 37.97	24.034	14 14 52.3	85.13	20	17 34 49.73	25.035	19 1 33.3	31.32
21	15 39 2.27	24.064	14 23 20.4	84.23	21	17 37 19.96	25.043	19 4 37.4	30.04
22	15 41 26.74	24.093	14 31 43.0	83.31	22	17 39 50.24	25.049	19 7 33.8	28.76
23	15 43 51.38	24.123			23	17 42 20.55	25.055		
THURSDAY 2.					SATURDAY 4.				
	h m s	s	S. 14 40 0.1	82.38		h m s	s	S. 19 10 22.5	27.47
0	15 46 16.21	24.152	14 48 11.5	81.43	0	17 44 50.90	25.061	19 13 3.4	26.18
1	15 48 41.20	24.180	14 56 17.2	80.48	1	17 47 21.28	25.065	19 15 36.7	24.90
2	15 51 6.37	24.209	15 4 17.2	79.52	2	17 49 51.68	25.068	19 18 2.2	23.61
3	15 53 31.71	24.238	15 12 11.4	78.54	3	17 52 22.10	25.072	19 20 20.0	22.33
4	15 55 57.22	24.266	15 19 59.7	77.55	4	17 54 52.54	25.074	19 22 30.1	21.03
5	15 58 22.90	24.293	15 27 42.0	76.56	5	17 57 22.99	25.076	19 24 32.3	19.73
6	16 0 48.74	24.321	15 35 18.4	75.56	6	17 59 53.45	25.077	19 26 26.8	18.43
7	16 3 14.75	24.348	15 42 48.7	74.53	7	18 2 23.91	25.077	19 28 13.5	17.13
8	16 5 40.91	24.374	15 50 12.8	73.51	8	18 4 54.37	25.076	19 29 52.4	15.83
9	16 8 7.24	24.402	15 57 30.8	72.48	9	18 7 24.82	25.074	19 31 23.4	14.53
10	16 10 33.73	24.428	16 4 42.5	71.43	10	18 9 55.26	25.072	19 32 46.7	13.23
11	16 13 0.38	24.454	16 11 47.9	70.38	11	18 12 25.68	25.069	19 34 2.2	11.93
12	16 15 27.18	24.479	16 18 47.0	69.32	12	18 14 56.09	25.066	19 35 9.9	10.63
13	16 17 54.13	24.504	16 25 39.7	68.24	13	18 17 26.47	25.061	19 36 9.7	9.32
14	16 20 21.23	24.529	16 32 25.9	67.15	14	18 19 56.82	25.056	19 37 1.7	8.03
15	16 22 48.48	24.553	16 39 5.5	66.06	15	18 22 27.14	25.050	19 37 46.0	6.73
16	16 25 15.87	24.578	16 45 38.6	64.97	16	18 24 57.42	25.043	19 38 22.4	5.42
17	16 27 43.41	24.602	16 52 5.1	63.86	17	18 27 27.66	25.036	19 38 51.0	4.12
18	16 30 11.09	24.624	16 58 24.9	62.74	18	18 29 57.85	25.028	19 39 11.8	2.83
19	16 32 38.90	24.647	17 4 38.0	61.62	19	18 32 27.99	25.019	19 39 24.9	1.53
20	16 35 6.85	24.669	17 10 44.3	60.48	20	18 34 58.08	25.009	19 39 30.1	0.23
21	16 37 34.93	24.691	17 16 43.7	59.33	21	18 37 28.10	24.998	19 39 27.6	1.07
22	16 40 3.14	24.713	17 22 36.3	58.19	22	18 39 58.06	24.988	19 39 17.3	2.37
23	16 42 31.48	24.733	17 28 22.0	57.03	23	18 42 27.95	24.976	19 38 59.2	3.66
24	16 44 59.93	24.753			24	18 44 57.77	24.963		

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
SUNDAY 5.					TUESDAY 7.				
	h m s	s	S. ° ' "	"		h m s	s	S. ° ' "	"
0	18 44 57.77	24.963	S. 19 38 59.2	3.66	0	20 42 7.23	23.653	S. 17 0 53.6	59.81
1	18 47 27.51	24.950	19 38 33.4	4.94	1	20 44 29.04	23.615	16 54 51.8	60.80
2	18 49 57.17	24.936	19 37 59.9	6.23	2	20 46 50.61	23.577	16 48 44.0	61.79
3	18 52 26.74	24.921	19 37 18.7	7.52	3	20 49 11.96	23.539	16 42 30.3	62.76
4	18 54 56.22	24.906	19 36 29.7	8.80	4	20 51 33.08	23.500	16 36 10.9	63.72
5	18 57 25.61	24.889	19 35 33.1	10.07	5	20 53 53.96	23.462	16 29 45.7	64.68
6	18 59 54.89	24.872	19 34 28.9	11.34	6	20 56 14.62	23.423	16 23 14.8	65.62
7	19 2 24.07	24.855	19 33 17.0	12.62	7	20 58 35.04	23.384	16 16 38.3	66.55
8	19 4 53.15	24.838	19 31 57.5	13.88	8	21 0 55.23	23.345	16 9 56.2	67.48
9	19 7 22.12	24.818	19 30 30.4	15.16	9	21 3 15.18	23.306	16 3 8.6	68.39
10	19 9 50.97	24.798	19 28 55.6	16.42	10	21 5 34.90	23.267	15 56 15.5	69.30
11	19 12 19.70	24.778	19 27 13.4	17.66	11	21 7 54.38	23.228	15 49 17.0	70.19
12	19 14 48.30	24.757	19 25 23.7	18.92	12	21 10 13.63	23.188	15 42 13.2	71.08
13	19 17 16.78	24.736	19 23 26.4	20.17	13	21 12 32.64	23.148	15 35 4.1	71.95
14	19 19 45.13	24.713	19 21 21.7	21.41	14	21 14 51.41	23.108	15 27 49.8	72.82
15	19 22 13.34	24.691	19 19 9.5	22.65	15	21 17 9.94	23.069	15 20 30.3	73.68
16	19 24 41.42	24.668	19 16 49.9	23.88	16	21 19 28.24	23.030	15 13 5.7	74.52
17	19 27 9.35	24.643	19 14 22.9	25.11	17	21 21 46.30	22.990	15 5 36.1	75.35
18	19 29 37.13	24.618	19 11 48.6	26.33	18	21 24 4.12	22.949	14 58 1.5	76.18
19	19 32 4.77	24.593	19 9 7.0	27.54	19	21 26 21.69	22.909	14 50 22.0	76.99
20	19 34 32.25	24.567	19 6 18.1	28.76	20	21 28 39.03	22.870	14 42 37.6	77.80
21	19 36 59.57	24.541	19 3 21.9	29.96	21	21 30 56.13	22.831	14 34 48.4	78.60
22	19 39 26.74	24.514	19 0 18.6	31.16	22	21 33 13.00	22.791	14 26 54.4	79.38
23	19 41 53.74	24.487	S. 18 57 8.0	32.36	23	21 35 29.62	22.751	S. 14 18 55.8	80.15
MONDAY 6.					WEDNESDAY 8.				
	h m s	s	S. ° ' "	"		h m s	s	S. ° ' "	"
0	19 44 20.58	24.458	S. 18 53 50.3	33.54	0	21 37 46.01	22.711	S. 14 10 52.6	80.92
1	19 46 47.24	24.429	18 50 25.5	34.73	1	21 40 2.15	22.671	14 2 44.8	81.67
2	19 49 13.73	24.400	18 46 53.6	35.89	2	21 42 18.06	22.632	13 54 32.6	82.41
3	19 51 40.04	24.371	18 43 14.8	37.06	3	21 44 33.73	22.592	13 46 15.9	83.15
4	19 54 6.18	24.341	18 39 28.9	38.23	4	21 46 49.16	22.553	13 37 54.8	83.88
5	19 56 32.13	24.310	18 35 36.0	39.38	5	21 49 4.36	22.513	13 29 29.4	84.58
6	19 58 57.90	24.279	18 31 36.3	40.53	6	21 51 19.32	22.473	13 20 59.8	85.28
7	20 1 23.48	24.248	18 27 29.7	41.67	7	21 53 34.04	22.435	13 12 26.0	85.98
8	20 3 48.87	24.216	18 23 16.3	42.79	8	21 55 48.54	22.396	13 3 48.1	86.66
9	20 6 14.07	24.183	18 18 56.2	43.92	9	21 58 2.79	22.356	12 55 6.1	87.33
10	20 8 39.07	24.150	18 14 29.3	45.04	10	22 0 16.81	22.318	12 46 20.2	87.98
11	20 11 3.87	24.117	18 9 55.7	46.15	11	22 2 30.60	22.279	12 37 30.3	88.63
12	20 13 28.47	24.083	18 5 15.5	47.25	12	22 4 44.16	22.241	12 28 36.6	89.28
13	20 15 52.87	24.049	18 0 28.7	48.34	13	22 6 57.49	22.202	12 19 39.0	89.91
14	20 18 17.06	24.015	17 55 35.4	49.43	14	22 9 10.58	22.163	12 10 37.7	90.52
15	20 20 41.05	23.980	17 50 35.6	50.51	15	22 11 23.45	22.126	12 1 32.8	91.13
16	20 23 4.82	23.944	17 45 29.3	51.58	16	22 13 36.09	22.088	11 52 24.2	91.73
17	20 25 28.38	23.909	17 40 16.7	52.63	17	22 15 48.50	22.050	11 43 12.1	92.32
18	20 27 51.73	23.874	17 34 57.5	53.69	18	22 18 0.69	22.013	11 33 56.4	92.89
19	20 30 14.87	23.838	17 29 32.4	54.73	19	22 20 12.66	21.976	11 24 37.4	93.45
20	20 32 37.78	23.801	17 24 0.9	55.77	20	22 22 24.40	21.938	11 15 15.0	94.01
21	20 35 0.48	23.764	17 18 23.2	56.79	21	22 24 35.92	21.902	11 5 49.3	94.56
22	20 37 22.95	23.727	17 12 39.4	57.81	22	22 26 47.22	21.865	10 56 20.3	95.09
23	20 39 45.20	23.690	17 6 49.5	58.82	23	22 28 58.30	21.828	10 46 48.2	95.61
24	20 42 7.23	23.653	S. 17 0 53.6	59.81	24	22 31 9.16	21.792	S. 10 37 13.0	96.12

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
THURSDAY 9.					SATURDAY 11.				
	h m s	s				h m s	s		
0	22 31 9.16	21.792	S. 10° 37' 13".0	96".12	0	0 12 10.27	20.433	S. 2° 16' 4".6	108".89
1	22 33 19.80	21.756	10 27 34.8	96.63	1	0 14 12.81	20.413	2 5 11.1	108.93
2	22 35 30.23	21.721	10 17 53.5	97.13	2	0 16 15.23	20.394	1 54 17.5	108.94
3	22 37 40.45	21.686	10 8 9.3	97.60	3	0 18 17.54	20.376	1 43 23.8	108.95
4	22 39 50.46	21.651	9 58 22.3	98.08	4	0 20 19.74	20.358	1 32 30.1	108.96
5	22 42 0.26	21.616	9 48 32.4	98.54	5	0 22 21.83	20.339	1 21 36.3	108.96
6	22 44 9.85	21.581	9 38 39.8	98.98	6	0 24 23.81	20.322	1 10 42.6	108.94
7	22 46 19.23	21.547	9 28 44.6	99.43	7	0 26 25.69	20.305	0 59 49.0	108.92
8	22 48 28.41	21.513	9 18 46.7	99.86	8	0 28 27.47	20.288	0 48 55.6	108.88
9	22 50 37.38	21.479	9 8 46.3	100.28	9	0 30 29.15	20.272	0 38 2.4	108.84
10	22 52 46.16	21.446	8 58 43.4	100.68	10	0 32 30.73	20.256	0 27 9.5	108.79
11	22 54 54.73	21.413	8 48 38.1	101.08	11	0 34 32.22	20.241	0 16 16.9	108.74
12	22 57 3.11	21.380	8 38 30.4	101.48	12	0 36 33.62	20.226	S. 0 5 24.6	108.68
13	22 59 11.29	21.348	8 28 20.4	101.86	13	0 38 34.93	20.211	N. 0 5 27.2	108.59
14	23 1 19.28	21.315	8 18 8.1	102.23	14	0 40 36.15	20.197	0 16 18.5	108.51
15	23 3 27.07	21.283	8 7 53.7	102.58	15	0 42 37.29	20.183	0 27 9.3	108.43
16	23 5 34.67	21.252	7 57 37.2	102.93	16	0 44 38.35	20.169	0 37 59.6	108.33
17	23 7 42.09	21.221	7 47 18.6	103.27	17	0 46 39.32	20.155	0 48 49.2	108.21
18	23 9 49.32	21.190	7 36 58.0	103.60	18	0 48 40.21	20.143	0 59 38.1	108.09
19	23 11 56.37	21.159	7 26 35.4	103.92	19	0 50 41.03	20.131	1 10 26.3	107.97
20	23 14 3.23	21.129	7 16 11.0	104.22	20	0 52 41.78	20.118	1 21 13.7	107.83
21	23 16 9.92	21.099	7 5 44.8	104.52	21	0 54 42.45	20.107	1 32 0.3	107.69
22	23 18 16.42	21.069	6 55 16.8	104.81	22	0 56 43.06	20.096	1 42 46.0	107.54
23	23 20 22.75	21.041	S. 6 44 47.1	105.08	23	0 58 43.60	20.084	N. 1 53 30.8	107.38
FRIDAY 10.					SUNDAY 12.				
0	23 22 28.91	21.013	S. 6 34 15.8	105.35	0	1 0 44.07	20.074	N. 2 4 14.6	107.21
1	23 24 34.90	20.983	6 23 42.9	105.61	1	1 2 44.49	20.064	2 14 57.3	107.04
2	23 26 40.71	20.955	6 13 8.5	105.86	2	1 4 44.84	20.053	2 25 39.0	106.86
3	23 28 46.36	20.928	6 2 32.6	106.10	3	1 6 45.13	20.044	2 36 19.6	106.67
4	23 30 51.85	20.901	5 51 55.3	106.33	4	1 8 45.37	20.035	2 46 59.0	106.47
5	23 32 57.17	20.873	5 41 16.7	106.54	5	1 10 45.55	20.027	2 57 37.2	106.27
6	23 35 2.32	20.846	5 30 36.8	106.75	6	1 12 45.69	20.018	3 8 14.2	106.05
7	23 37 7.32	20.821	5 19 55.7	106.95	7	1 14 45.77	20.010	3 18 49.8	105.83
8	23 39 12.17	20.795	5 9 13.4	107.14	8	1 16 45.81	20.002	3 29 24.1	105.59
9	23 41 16.86	20.769	4 58 30.0	107.33	9	1 18 45.80	19.995	3 39 56.9	105.35
10	23 43 21.40	20.744	4 47 45.5	107.50	10	1 20 45.75	19.988	3 50 28.3	105.11
11	23 45 25.79	20.719	4 37 0.0	107.66	11	1 22 45.66	19.981	4 0 58.2	104.86
12	23 47 30.03	20.695	4 26 13.6	107.80	12	1 24 45.52	19.974	4 11 26.6	104.60
13	23 49 34.13	20.671	4 15 26.4	107.94	13	1 26 45.35	19.969	4 21 53.4	104.33
14	23 51 38.08	20.647	4 4 38.3	108.08	14	1 28 45.15	19.964	4 32 18.5	104.05
15	23 53 41.89	20.624	3 53 49.5	108.20	15	1 30 44.92	19.958	4 42 42.0	103.78
16	23 55 45.57	20.602	3 42 59.9	108.32	16	1 32 44.65	19.953	4 53 3.8	103.48
17	23 57 49.11	20.578	3 32 9.7	108.42	17	1 34 44.36	19.949	5 3 23.8	103.18
18	23 59 52.51	20.557	3 21 18.9	108.52	18	1 36 44.04	19.944	5 13 42.0	102.88
19	0 1 55.79	20.535	3 10 27.5	108.60	19	1 38 43.69	19.940	5 23 58.3	102.56
20	0 3 58.93	20.513	2 59 35.7	108.68	20	1 40 43.32	19.937	5 34 12.7	102.23
21	0 6 1.95	20.493	2 48 43.4	108.74	21	1 42 42.93	19.934	5 44 25.1	101.91
22	0 8 4.85	20.473	2 37 50.8	108.80	22	1 44 42.53	19.931	5 54 35.6	101.58
23	0 10 7.62	20.452	2 26 57.8	108.85	23	1 46 42.10	19.928	6 4 44.1	101.23
24	0 12 10.27	20.433	S. 2 16 4.6	108.89	24	1 48 41.66	19.926	N. 6 14 50.4	100.88

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
MONDAY 13.					WEDNESDAY 15.				
0	1 48 41.66	19.926	N. 6 14 50.4	100.88	0	3 24 35.45	20.119	N. 13 26 21.6	76.59
1	1 50 41.21	19.924	6 24 54.7	100.53	1	3 26 36.19	20.128	13 33 59.2	75.94
2	1 52 40.75	19.922	6 34 56.8	100.17	2	3 28 36.98	20.137	13 41 32.9	75.29
3	1 54 40.27	19.920	6 44 56.7	99.79	3	3 30 37.83	20.147	13 49 2.7	74.63
4	1 56 39.79	19.920	6 54 54.3	99.42	4	3 32 38.74	20.156	13 56 28.5	73.97
5	1 58 39.31	19.919	7 4 49.7	99.03	5	3 34 39.70	20.165	14 3 50.3	73.31
6	2 0 38.82	19.918	7 14 42.7	98.64	6	3 36 40.72	20.174	14 11 8.2	72.64
7	2 2 38.32	19.918	7 24 33.4	98.25	7	3 38 41.79	20.183	14 18 22.0	71.96
8	2 4 37.83	19.918	7 34 21.7	97.84	8	3 40 42.92	20.193	14 25 31.7	71.28
9	2 6 37.34	19.918	7 44 7.5	97.43	9	3 42 44.11	20.203	14 32 37.4	70.60
10	2 8 36.85	19.919	7 53 50.8	97.01	10	3 44 45.36	20.213	14 39 38.9	69.91
11	2 10 36.37	19.920	8 3 31.6	96.59	11	3 46 46.67	20.223	14 46 36.3	69.22
12	2 12 35.89	19.922	8 13 9.9	96.16	12	3 48 48.04	20.233	14 53 29.5	68.52
13	2 14 35.43	19.923	8 22 45.5	95.72	13	3 50 49.46	20.243	15 0 18.5	67.82
14	2 16 34.97	19.924	8 32 18.5	95.28	14	3 52 50.95	20.253	15 7 3.3	67.11
15	2 18 34.52	19.927	8 41 48.8	94.82	15	3 54 52.50	20.264	15 13 43.8	66.39
16	2 20 34.09	19.929	8 51 16.3	94.36	16	3 56 54.12	20.274	15 20 20.0	65.68
17	2 22 33.67	19.931	9 0 41.1	93.90	17	3 58 55.79	20.284	15 26 51.9	64.96
18	2 24 33.26	19.934	9 10 3.1	93.43	18	4 0 57.53	20.295	15 33 19.5	64.23
19	2 26 32.88	19.938	9 19 22.3	92.96	19	4 2 59.33	20.305	15 39 42.7	63.51
20	2 28 32.51	19.941	9 28 38.6	92.48	20	4 5 1.19	20.316	15 46 1.6	62.78
21	2 30 32.17	19.945	9 37 52.0	91.98	21	4 7 3.12	20.326	15 52 16.0	62.03
22	2 32 31.85	19.948	9 47 2.4	91.48	22	4 9 5.10	20.336	15 58 26.0	61.30
23	2 34 31.55	19.952	N. 9 56 9.8	90.98	23	4 11 7.15	20.348	N. 16 4 31.6	60.55
TUESDAY 14.					THURSDAY 16.				
0	2 36 31.27	19.956	N. 10 5 14.2	90.48	0	4 13 9.27	20.358	N. 16 10 32.6	59.79
1	2 38 31.02	19.961	10 14 15.6	89.97	1	4 15 11.45	20.369	16 16 29.1	59.04
2	2 40 30.80	19.966	10 23 13.8	89.45	2	4 17 13.70	20.380	16 22 21.1	58.29
3	2 42 30.61	19.971	10 32 9.0	88.93	3	4 19 16.01	20.391	16 28 8.6	57.53
4	2 44 30.45	19.976	10 41 0.9	88.38	4	4 21 18.39	20.402	16 33 51.5	56.77
5	2 46 30.32	19.981	10 49 49.6	87.85	5	4 23 20.83	20.413	16 39 29.8	55.99
6	2 48 30.22	19.987	10 58 35.1	87.32	6	4 25 23.34	20.423	16 45 3.4	55.22
7	2 50 30.16	19.993	11 7 17.4	86.77	7	4 27 25.91	20.433	16 50 32.4	54.44
8	2 52 30.13	19.998	11 15 56.3	86.21	8	4 29 28.54	20.444	16 55 56.7	53.67
9	2 54 30.14	20.005	11 24 31.9	85.64	9	4 31 31.24	20.455	17 1 16.4	52.88
10	2 56 30.19	20.012	11 33 4.0	85.08	10	4 33 34.00	20.466	17 6 31.3	52.09
11	2 58 30.28	20.018	11 41 32.8	84.52	11	4 35 36.83	20.478	17 11 41.5	51.31
12	3 0 30.41	20.024	11 49 58.2	83.93	12	4 37 39.73	20.488	17 16 47.0	50.51
13	3 2 30.57	20.031	11 58 20.0	83.35	13	4 39 42.69	20.498	17 21 47.6	49.71
14	3 4 30.78	20.039	12 6 38.4	82.77	14	4 41 45.71	20.509	17 26 43.5	48.92
15	3 6 31.04	20.047	12 14 53.2	82.17	15	4 43 48.80	20.520	17 31 34.6	48.11
16	3 8 31.34	20.053	12 23 4.4	81.57	16	4 45 51.95	20.530	17 36 20.8	47.29
17	3 10 31.68	20.061	12 31 12.0	80.97	17	4 47 55.16	20.541	17 41 2.1	46.48
18	3 12 32.07	20.069	12 39 16.0	80.36	18	4 49 58.44	20.552	17 45 38.6	45.68
19	3 14 32.51	20.078	12 47 16.3	79.74	19	4 52 1.78	20.562	17 50 10.2	44.85
20	3 16 33.00	20.085	12 55 12.9	79.12	20	4 54 5.18	20.573	17 54 36.8	44.03
21	3 18 33.53	20.093	13 3 5.7	78.49	21	4 56 8.65	20.583	17 58 58.6	43.22
22	3 20 34.12	20.103	13 10 54.8	77.87	22	4 58 12.18	20.593	18 3 15.4	42.38
23	3 22 34.76	20.111	13 18 40.1	77.23	23	5 0 15.77	20.604	18 7 27.2	41.55
24	3 24 35.45	20.119	N. 13 26 21.6	76.59	24	5 2 19.43	20.614	N. 18 11 34.0	40.73

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
FRIDAY 17.					SUNDAY 19.				
	h m s	s	N. 18 11 34.0	40.73		h m s	s	N. 19 46 43.6	1.73
0	5 2 19.43	20.614			0	6 42 15.82	20.979		
1	5 4 23.14	20.624	18 15 35.9	39.89	1	6 44 21.71	20.983	19 46 30.5	2.65
2	5 6 26.92	20.634	18 19 32.7	39.05	2	6 46 27.62	20.988	19 46 11.8	3.58
3	5 8 30.75	20.644	18 23 24.5	38.21	3	6 48 33.56	20.992	19 45 47.6	4.49
4	5 10 34.65	20.655	18 27 11.2	37.36	4	6 50 39.52	20.996	19 45 17.9	5.41
5	5 12 38.61	20.664	18 30 52.8	36.52	5	6 52 45.51	20.999	19 44 42.7	6.33
6	5 14 42.62	20.673	18 34 29.4	35.68	6	6 54 51.51	21.002	19 44 2.0	7.24
7	5 16 46.69	20.683	18 38 0.9	34.82	7	6 56 57.54	21.006	19 43 15.8	8.16
8	5 18 50.82	20.693	18 41 27.2	33.96	8	6 59 3.58	21.009	19 42 24.1	9.08
9	5 20 55.01	20.703	18 44 48.4	33.11	9	7 1 9.65	21.013	19 41 26.9	10.00
10	5 22 59.26	20.713	18 48 4.5	32.25	10	7 3 15.73	21.015	19 40 24.1	10.93
11	5 25 3.56	20.722	18 51 15.4	31.38	11	7 5 21.83	21.018	19 39 15.8	11.84
12	5 27 7.92	20.731	18 54 21.1	30.53	12	7 7 27.95	21.021	19 38 2.0	12.76
13	5 29 12.33	20.740	18 57 21.7	29.66	13	7 9 34.08	21.023	19 36 42.7	13.68
14	5 31 16.80	20.749	19 0 17.0	28.78	14	7 11 40.23	21.026	19 35 17.9	14.59
15	5 33 21.32	20.758	19 3 7.1	27.92	15	7 13 46.39	21.028	19 33 47.6	15.52
16	5 35 25.90	20.768	19 5 52.0	27.05	16	7 15 52.56	21.030	19 32 11.7	16.44
17	5 37 30.53	20.775	19 8 31.7	26.18	17	7 17 58.75	21.033	19 30 30.3	17.35
18	5 39 35.20	20.783	19 11 6.1	25.29	18	7 20 4.95	21.034	19 28 43.5	18.27
19	5 41 39.93	20.793	19 13 35.2	24.41	19	7 22 11.16	21.036	19 26 51.1	19.19
20	5 43 44.71	20.801	19 15 59.0	23.53	20	7 24 17.38	21.038	19 24 53.2	20.11
21	5 45 49.54	20.809	19 18 17.6	22.66	21	7 26 23.61	21.039	19 22 49.8	21.03
22	5 47 54.42	20.818	19 20 30.9	21.77	22	7 28 29.85	21.041	19 20 40.9	21.94
23	5 49 59.35	20.826	N. 19 22 38.8	20.88	23	7 30 36.10	21.042	N. 19 18 26.5	22.86
SATURDAY 18.					MONDAY 20.				
	h m s	s	N. 19 24 41.4	19.99		h m s	s	N. 19 16 6.6	23.78
0	5 52 4.33	20.833			0	7 32 42.35	21.043		
1	5 54 9.35	20.840	19 26 38.7	19.10	1	7 34 48.61	21.044	19 13 41.2	24.68
2	5 56 14.41	20.848	19 28 30.6	18.21	2	7 36 54.88	21.045	19 11 10.4	25.60
3	5 58 19.53	20.857	19 30 17.2	17.32	3	7 39 1.15	21.045	19 8 34.0	26.52
4	6 0 24.69	20.863	19 31 58.4	16.42	4	7 41 7.42	21.046	19 5 52.2	27.43
5	6 2 29.89	20.870	19 33 34.2	15.53	5	7 43 13.70	21.048	19 3 4.9	28.34
6	6 4 35.13	20.877	19 35 4.7	14.63	6	7 45 19.99	21.048	19 0 12.1	29.25
7	6 6 40.41	20.884	19 36 29.7	13.73	7	7 47 26.27	21.048	18 57 13.9	30.16
8	6 8 45.74	20.892	19 37 49.4	12.83	8	7 49 32.56	21.048	18 54 10.2	31.07
9	6 10 51.11	20.898	19 39 3.6	11.92	9	7 51 38.85	21.048	18 51 1.1	31.98
10	6 12 56.51	20.903	19 40 12.4	11.02	10	7 53 45.14	21.049	18 47 46.5	32.88
11	6 15 1.95	20.910	19 41 15.8	10.12	11	7 55 51.44	21.049	18 44 26.5	33.79
12	6 17 7.43	20.917	19 42 13.8	9.22	12	7 57 57.73	21.048	18 41 1.0	34.69
13	6 19 12.95	20.923	19 43 6.4	8.31	13	8 0 4.02	21.048	18 37 30.2	35.59
14	6 21 18.51	20.929	19 43 53.5	7.39	14	8 2 10.31	21.048	18 33 53.9	36.50
15	6 23 24.10	20.934	19 44 35.1	6.48	15	8 4 16.60	21.048	18 30 12.2	37.40
16	6 25 29.72	20.940	19 45 11.3	5.58	16	8 6 22.89	21.048	18 26 25.1	38.30
17	6 27 35.38	20.945	19 45 42.0	4.66	17	8 8 29.18	21.048	18 22 32.6	39.19
18	6 29 41.06	20.950	19 46 7.2	3.75	18	8 10 35.47	21.048	18 18 34.8	40.09
19	6 31 46.78	20.956	19 46 27.0	2.84	19	8 12 41.75	21.047	18 14 31.5	40.99
20	6 33 52.53	20.961	19 46 41.3	1.93	20	8 14 48.03	21.047	18 10 22.9	41.88
21	6 35 58.31	20.966	19 46 50.1	1.02	21	8 16 54.31	21.046	18 6 9.0	42.77
22	6 38 4.12	20.971	19 46 53.5	0.10	22	8 19 0.58	21.045	18 1 49.7	43.66
23	6 40 9.96	20.975	19 46 51.3	0.83	23	8 21 6.85	21.044	17 57 25.1	44.54
24	6 42 15.82	20.979	N. 19 46 43.6	1.73	24	8 23 13.11	21.043	N. 17 52 55.2	45.43

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
TUESDAY 21.					THURSDAY 23.				
	h m s	s				h m s	s		
0	8 23 13.11	21.043	N. 17 52 55.2	45.43	0	10 4 11.50	21.059	N. 12 37 38.8	84.68
1	8 25 19.37	21.043	17 48 20.0	46.32	1	10 6 17.86	21.062	12 29 8.5	85.41
2	8 27 25.63	21.043	17 43 39.4	47.20	2	10 8 24.24	21.065	12 20 33.9	86.13
3	8 29 31.88	21.042	17 38 53.6	48.08	3	10 10 30.64	21.068	12 11 55.0	86.84
4	8 31 38.13	21.042	17 34 2.5	48.95	4	10 12 37.06	21.073	12 3 11.8	87.55
5	8 33 44.38	21.041	17 29 6.2	49.83	5	10 14 43.51	21.078	11 54 24.4	88.25
6	8 35 50.62	21.039	17 24 4.6	50.70	6	10 16 49.99	21.082	11 45 32.8	88.96
7	8 37 56.85	21.038	17 18 57.8	51.58	7	10 18 56.49	21.085	11 36 36.9	89.65
8	8 40 3.08	21.038	17 13 45.7	52.44	8	10 21 3.01	21.090	11 27 37.0	90.33
9	8 42 9.30	21.037	17 8 28.5	53.31	9	10 23 9.57	21.096	11 18 32.9	91.03
10	8 44 15.52	21.037	17 3 6.0	54.18	10	10 25 16.16	21.101	11 9 24.7	91.71
11	8 46 21.74	21.036	16 57 38.4	55.03	11	10 27 22.78	21.106	11 0 12.4	92.38
12	8 48 27.95	21.034	16 52 5.6	55.90	12	10 29 29.43	21.112	10 50 56.2	93.04
13	8 50 34.15	21.033	16 46 27.6	56.75	13	10 31 36.12	21.118	10 41 35.9	93.71
14	8 52 40.35	21.033	16 40 44.6	57.60	14	10 33 42.84	21.123	10 32 11.7	94.36
15	8 54 46.55	21.033	16 34 56.4	58.46	15	10 35 49.60	21.131	10 22 43.6	95.01
16	8 56 52.74	21.032	16 29 3.1	59.31	16	10 37 56.41	21.138	10 13 11.6	95.65
17	8 58 58.93	21.032	16 23 4.7	60.15	17	10 40 3.25	21.143	10 3 35.8	96.28
18	9 1 5.12	21.031	16 17 1.3	60.99	18	10 42 10.13	21.151	9 53 56.2	96.92
19	9 3 11.30	21.030	16 10 52.8	61.84	19	10 44 17.06	21.159	9 44 12.8	97.55
20	9 5 17.48	21.030	16 4 39.2	62.68	20	10 46 24.04	21.167	9 34 25.6	98.17
21	9 7 23.66	21.029	15 58 20.7	63.51	21	10 48 31.06	21.175	9 24 34.8	98.78
22	9 9 29.83	21.029	15 51 57.1	64.34	22	10 50 38.14	21.183	9 14 40.3	99.38
23	9 11 36.01	21.029	N. 15 45 28.6	65.17	23	10 52 45.26	21.192	N. 9 4 42.2	99.97
WEDNESDAY 22.					FRIDAY 24.				
	h m s	s				h m s	s		
0	9 13 42.18	21.028	N. 15 38 55.1	65.99	0	10 54 52.44	21.201	N. 8 54 40.6	100.57
1	9 15 48.35	21.028	15 32 16.7	66.82	1	10 56 59.67	21.210	8 44 35.4	101.16
2	9 17 54.52	21.028	15 25 33.3	67.63	2	10 59 6.96	21.220	8 34 26.7	101.73
3	9 20 0.68	21.028	15 18 45.1	68.45	3	11 1 14.31	21.229	8 24 14.6	102.31
4	9 22 6.85	21.029	15 11 51.9	69.27	4	11 3 21.71	21.239	8 13 59.0	102.88
5	9 24 13.03	21.029	15 4 53.9	70.07	5	11 5 20.18	21.250	8 3 40.1	103.43
6	9 26 19.20	21.029	14 57 51.1	70.88	6	11 7 36.71	21.261	7 53 17.9	103.98
7	9 28 25.38	21.030	14 50 43.4	71.68	7	11 9 44.31	21.273	7 42 52.4	104.52
8	9 30 31.56	21.030	14 43 31.0	72.47	8	11 11 51.98	21.283	7 32 23.7	105.05
9	9 32 37.74	21.031	14 36 13.8	73.27	9	11 13 59.71	21.295	7 21 51.8	105.58
10	9 34 43.93	21.032	14 28 51.8	74.06	10	11 16 7.52	21.308	7 11 16.7	106.11
11	9 36 50.12	21.033	14 21 25.1	74.84	11	11 18 15.40	21.320	7 0 38.5	106.62
12	9 38 56.32	21.033	14 13 53.7	75.63	12	11 20 23.36	21.333	6 49 57.3	107.12
13	9 41 2.52	21.035	14 6 17.6	76.41	13	11 22 31.39	21.345	6 39 13.1	107.62
14	9 43 8.74	21.037	13 58 36.8	77.18	14	11 24 39.50	21.359	6 28 25.9	108.11
15	9 45 14.96	21.038	13 50 51.4	77.95	15	11 26 47.70	21.373	6 17 35.8	108.58
16	9 47 21.19	21.039	13 43 1.4	78.71	16	11 28 55.98	21.387	6 6 42.9	109.05
17	9 49 27.43	21.041	13 35 6.9	79.47	17	11 31 4.34	21.401	5 55 47.2	109.52
18	9 51 33.68	21.043	13 27 7.8	80.23	18	11 33 12.79	21.417	5 44 48.7	109.97
19	9 53 39.95	21.046	13 19 4.1	80.98	19	11 35 21.34	21.432	5 33 47.5	110.42
20	9 55 46.23	21.048	13 10 56.0	81.73	20	11 37 29.97	21.447	5 22 43.7	110.86
21	9 57 52.52	21.050	13 2 43.3	82.48	21	11 39 38.70	21.463	5 11 37.2	111.28
22	9 59 58.83	21.053	12 54 26.2	83.22	22	11 41 47.53	21.480	5 0 28.3	111.70
23	10 2 5.15	21.056	12 46 4.7	83.95	23	11 43 56.46	21.496	4 49 16.8	112.12
24	10 4 11.50	21.059	N. 12 37 38.8	84.68	24	11 46 5.48	21.513	N. 4 38 2.9	112.53

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
SATURDAY 25.					MONDAY 27.				
	h m s	s	N. ° ' "	"		h m s	s	S. ° ' "	"
0	11 46 5.48	21 513	N. 4 38 2.9	112 53	0	13 32 1.71	22.769	S. 4 48 28.6	119.00
1	11 48 14.61	21 531	4 26 46.5	112 92	1	13 34 18.43	22.804	5 0 22.1	118.83
2	11 50 23.85	21.548	4 15 27.9	113 29	2	13 36 35.36	22.839	5 12 14.5	118.64
3	11 52 33.19	21.566	4 4 7.0	113.67	3	13 38 52.50	22 875	5 24 5.8	118.44
4	11 54 42.64	21 584	3 52 43.9	114 03	4	13 41 9.86	22 911	5 35 55.8	118.23
5	11 56 52.20	21 603	3 41 18.6	114.39	5	13 43 27.43	22 946	5 47 44.5	118.00
6	11 59 1.88	21 623	3 29 51.2	114.73	6	13 45 45.21	22 982	5 59 31.8	117.75
7	12 1 11.68	21 643	3 18 21.8	115.07	7	13 48 3.21	23 018	6 11 17.5	117.48
8	12 3 21.59	21 663	3 6 50.4	115.40	8	13 50 21.43	23 056	6 23 1.6	117.21
9	12 5 31.63	21 683	2 55 17.0	115.72	9	13 52 39.88	23 093	6 34 44.0	116.93
10	12 7 41.79	21.703	2 43 41.8	116.02	10	13 54 58.54	23 129	6 46 24.7	116.62
11	12 9 52.07	21 724	2 32 4.8	116 31	11	13 57 17.43	23 167	6 58 3.4	116.29
12	12 12 2.48	21.747	2 20 26.1	116.59	12	13 59 36.54	23 204	7 9 40.2	115.97
13	12 14 13.03	21 768	2 8 45.7	116 87	13	14 1 55.88	23.243	7 21 15.0	115.62
14	12 16 23.70	21.790	1 57 3.7	117.13	14	14 4 15.45	23 280	7 32 47.6	115.25
15	12 18 34.51	21.813	1 45 20.1	117.38	15	14 6 35.24	23.318	7 44 18.0	114.88
16	12 20 45.46	21 836	1 33 35.1	117.63	16	14 8 55.27	23 357	7 55 46.1	114.48
17	12 22 56.51	21 859	1 21 48.6	117.86	17	14 11 15.52	23 395	8 7 11.8	114.08
18	12 25 7.77	21 883	1 10 0.8	118 08	18	14 13 36.01	23.434	8 18 35.0	113.65
19	12 27 19.14	21 908	0 58 11.7	118.28	19	14 15 56.73	23.473	8 29 55.6	113.22
20	12 29 30.66	21.933	0 46 21.4	118 48	20	14 18 17.68	23 512	8 41 13.6	112.76
21	12 31 42.33	21 958	0 34 30.0	118 66	21	14 20 38.87	23.551	8 52 28.7	112.28
22	12 33 54.15	21 983	0 22 37.5	118 84	22	14 23 0.29	23 589	9 3 41.0	111.81
23	12 36 6.12	22.008	N. 0 10 43.9	119 01	23	14 25 21.94	23.629	S. 9 14 50.4	111.31
SUNDAY 26.					TUESDAY 28.				
	h m s	s	S. ° ' "	"		h m s	s	S. ° ' "	"
0	12 38 18.25	22.034	S. 0 1 10.6	119.16	0	14 27 43.84	23 669	S. 9 25 56.7	110.79
1	12 40 30.53	22 061	0 13 6.0	119.30	1	14 30 5.97	23.708	9 36 59.9	110.26
2	12 42 42.98	22.088	0 25 2.2	119 43	2	14 32 28.34	23.748	9 47 59.8	109.72
3	12 44 55.59	22.115	0 36 59.1	119 53	3	14 34 50.95	23 788	9 58 56.5	109.17
4	12 47 8.36	22.143	0 48 56.6	119.64	4	14 37 13.79	23.827	10 9 49.8	108.58
5	12 49 21.30	22.171	1 0 54.8	119 73	5	14 39 36.87	23 868	10 20 39.5	107.99
6	12 51 34.41	22.199	1 12 53.4	119 81	6	14 42 0.20	23.908	10 31 25.7	107.39
7	12 53 47.69	22.228	1 24 52.5	119 88	7	14 44 23.76	23.946	10 42 8.2	106.77
8	12 56 1.14	22.257	1 36 51.9	119.93	8	14 46 47.55	23.986	10 52 46.9	106.13
9	12 58 14.77	22.287	1 48 51.7	119 98	9	14 49 11.59	24.027	11 3 21.8	105.48
10	13 0 28.58	22 316	2 0 51.6	120 00	10	14 51 35.87	24.066	11 13 52.7	104.82
11	13 2 42.56	22.346	2 12 51.7	120 02	11	14 54 0.38	24.105	11 24 19.6	104.13
12	13 4 56.73	22.378	2 24 51.8	120 02	12	14 56 25.13	24 145	11 34 42.3	103.43
13	13 7 11.09	22.408	2 36 51.9	120 01	13	14 58 50.12	24.185	11 45 0.8	102.73
14	13 9 25.63	22 438	2 48 51.9	119 98	14	15 1 15.35	24.224	11 55 15.1	102.01
15	13 11 40.35	22 470	3 0 51.7	119.95	15	15 3 40.81	24 263	12 5 24.9	101.26
16	13 13 55.27	22.503	3 12 51.3	119 90	16	15 6 6.51	24.303	12 15 30.2	100.50
17	13 16 10.38	22.535	3 24 50.5	119 83	17	15 8 32.44	24 342	12 25 30.9	99.73
18	13 18 25.69	22.568	3 36 49.3	119 76	18	15 10 58.61	24 381	12 35 27.0	98.95
19	13 20 41.19	22.600	3 48 47.6	119.67	19	15 13 25.01	24.420	12 45 18.3	98.15
20	13 22 56.89	22.633	4 0 45.3	119.56	20	15 15 51.65	24.458	12 55 4.8	97.34
21	13 25 12.79	22.667	4 12 42.3	119.44	21	15 18 18.51	24.497	13 4 46.4	96.51
22	13 27 28.89	22.701	4 24 38.6	119.32	22	15 20 45.61	24.535	13 14 22.9	95.66
23	13 29 45.20	22.735	4 36 34.1	119.17	23	15 23 12.93	24 573	13 23 54.3	94.81
24	13 32 1.71	22 769	S. 4 48 28.6	119.00	24	15 25 40.48	24 611	S. 13 33 20.6	93.93

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
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WEDNESDAY 29.

	h	m	s	s		h	m	s	s				
0	15	25	40	48	24	611	S.	13	33	20	6	93	93
1	15	28	8	26	24	648		13	42	41	5	93	04
2	15	30	36	26	24	686		13	51	57	1	92	15
3	15	33	4	49	24	723		14	1	7	3	91	24
4	15	35	32	93	24	759		14	10	12	0	90	31
5	15	38	1	60	24	796		14	19	11	0	89	37
6	15	40	30	48	24	831		14	28	4	4	88	42
7	15	42	59	57	24	867		14	36	52	0	87	44
8	15	45	28	88	24	903		14	45	33	7	86	46
9	15	47	58	40	24	938		14	54	9	5	85	47
10	15	50	28	13	24	972		15	2	39	3	84	46
11	15	52	58	06	25	005		15	11	3	0	83	43
12	15	55	28	19	25	039		15	19	20	5	82	40
13	15	57	58	53	25	073		15	27	31	8	81	36
14	16	0	29	06	25	105		15	35	36	8	80	30
15	16	2	59	79	25	138		15	43	35	4	79	23
16	16	5	30	71	25	168		15	51	27	6	78	15
17	16	8	1	82	25	200		15	59	13	2	77	05
18	16	10	33	11	25	231		16	6	52	2	75	94
19	16	13	4	59	25	261		16	14	24	5	74	83
20	16	15	36	24	25	290		16	21	50	1	73	70
21	16	18	8	07	25	319		16	29	8	9	72	56
22	16	20	40	07	25	348		16	36	20	8	71	40
23	16	23	12	24	25	375	S.	16	43	25	7	70	24

THURSDAY 30.

0	16	25	44	57	25	402	S. 16	50	23	7	69	07
1	16	28	17	06	25	428	16	57	14	5	67	88
2	16	30	49	71	25	454	17	3	58	3	66	69
3	16	33	22	51	25	479	17	10	34	8	65	48
4	16	35	55	46	25	503	17	17	4	1	64	28
5	16	38	28	55	25	527	17	23	26	1	63	05
6	16	41	1	78	25	549	17	29	40	7	61	82
7	16	43	35	14	25	572	17	35	47	9	60	58
8	16	46	8	64	25	593	17	41	47	6	59	33
9	16	48	42	26	25	614	17	47	39	8	58	08
10	16	51	16	01	25	634	17	53	24	5	56	81
11	16	53	49	87	25	653	17	59	1	5	55	53
12	16	56	23	84	25	671	18	4	30	8	54	24
13	16	58	57	92	25	688	18	9	52	4	52	95
14	17	1	32	10	25	704	18	15	6	2	51	66
15	17	4	6	37	25	720	18	20	12	3	50	36
16	17	6	40	74	25	736	18	25	10	5	49	03
17	17	9	15	20	25	749	18	30	0	7	47	72
18	17	11	49	73	25	763	18	34	43	1	46	40
19	17	14	24	35	25	775	18	39	17	5	45	07
20	17	16	59	03	25	786	18	43	43	9	43	73
21	17	19	33	78	25	796	18	48	2	3	42	39
22	17	22	8	58	25	806	18	52	12	6	41	04
23	17	24	43	45	25	815	18	56	14	8	39	69
24	17	27	18	36	25	822	S. 19	0	8	9	38	33

FRIDAY 31.

	h	m	s	s		S.	19	0	8	9	38	33	
0	17	27	18	36	25	822	19	3	54	8	36	97	
1	17	29	53	31	25	828	19	7	32	5	35	61	
2	17	32	28	30	25	835	19	11	2	1	34	24	
3	17	35	3	33	25	840	19	14	23	4	32	87	
4	17	37	38	38	25	843	19	17	36	5	31	49	
5	17	40	13	45	25	847	19	20	41	3	30	11	
6	17	42	48	54	25	849	19	23	37	8	28	73	
7	17	45	23	64	25	849	19	26	26	0	27	34	
8	17	47	58	73	25	849	19	29	5	9	25	96	
9	17	50	33	83	25	849	19	31	37	5	24	58	
10	17	53	8	92	25	847	19	34	0	8	23	18	
11	17	55	43	99	25	843	19	36	15	7	21	79	
12	17	58	19	04	25	840	19	38	22	3	20	40	
13	18	0	54	07	25	835	19	40	20	5	19	00	
14	18	3	29	06	25	829	19	42	10	3	17	61	
15	18	6	4	02	25	823	19	43	51	8	16	22	
16	18	8	38	94	25	815	19	45	24	9	14	82	
17	18	11	13	80	25	806	19	46	49	6	13	43	
18	18	13	48	61	25	797	19	48	6	0	12	03	
19	18	16	23	36	25	786	19	49	14	0	10	64	
20	18	18	58	04	25	774	19	50	13	7	9	26	
21	18	21	32	65	25	762	19	51	5	1	7	87	
22	18	24	7	18	25	748	S.	19	51	48	1	6	48
23	18	26	41	62	25	733							

SATURDAY, NOV. 1.

0	18	29	15	98	25	718	S. 19	52	22	8	5	09
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PHASES OF THE MOON.

						h	m
Oct.	5	☾	First Quarter	-	-	2	30.0
	12	☾	Full Moon	-	-	8	21.2
	20	☾	Last Quarter	-	-	10	54.4
	27	●	New Moon	-	-	18	57.0

						h	
Oct.	2	☾	Perigee	-	-	2	2
	17	☾	Apogee	-	-	20	3
	29	☾	Perigee	-	-	17	1

AT APPARENT NOON.

Date.	THE SUN'S				Sidereal Time of the Semi- diameter passing the Meridian.*	Equation of Time, to be subtracted from Apparent Time.	Var. in 1 hour.
	Apparent Right Ascension.	Var. in 1 hour.	Apparent Declination.	Var. in 1 hour.			
	h m s	s	° ' "	"	m s	m s	s
Sat.	1 14 25 35.53	9.796	S.14 25 57.4	48.11	1 6.87	16 20.51	0.060
Sun.	2 14 29 31.02	9.829	14 45 5.0	47.52	1 6.99	16 21.57	0.028
Mon.	3 14 33 27.31	9.862	15 3 58.2	46.91	1 7.11	16 21.84	0.005
Tues.	4 14 37 24.39	9.895	15 22 36.6	46.28	1 7.22	16 21.31	0.039
Wed.	5 14 41 22.28	9.929	15 40 59.8	45.64	1 7.34	16 19.98	0.072
Thur.	6 14 45 20.98	9.963	15 59 7.3	44.98	1 7.46	16 17.84	0.106
Frid.	7 14 49 20.50	9.997	16 16 58.7	44.30	1 7.58	16 14.88	0.141
Sat.	8 14 53 20.85	10.032	16 34 33.7	43.61	1 7.70	16 11.09	0.175
Sun.	9 14 57 22.04	10.067	16 51 51.8	42.90	1 7.82	16 6.48	0.210
Mon.	10 15 1 24.07	10.102	17 8 52.7	42.17	1 7.94	16 1.02	0.245
Tues.	11 15 5 26.95	10.137	17 25 36.0	41.43	1 8.06	15 54.71	0.280
Wed.	12 15 9 30.67	10.173	17 42 1.3	40.67	1 8.18	15 47.56	0.316
Thur.	13 15 13 35.26	10.209	17 58 8.2	39.90	1 8.29	15 39.55	0.351
Frid.	14 15 17 40.70	10.245	18 13 56.3	39.10	1 8.41	15 30.69	0.387
Sat.	15 15 21 47.00	10.280	18 29 25.2	38.30	1 8.53	15 20.97	0.423
Sun.	16 15 25 54.16	10.316	18 44 34.7	37.48	1 8.65	15 10.39	0.459
Mon.	17 15 30 2.18	10.352	18 59 24.2	36.64	1 8.76	14 58.96	0.494
Tues.	18 15 34 11.05	10.387	19 13 53.4	35.79	1 8.88	14 46.68	0.529
Wed.	19 15 38 20.77	10.423	19 28 2.0	34.92	1 8.99	14 33.55	0.565
Thur.	20 15 42 31.34	10.458	19 41 49.6	34.04	1 9.11	14 19.58	0.599
Frid.	21 15 46 42.74	10.492	19 55 15.8	33.14	1 9.22	14 4.78	0.634
Sat.	22 15 50 54.96	10.527	20 8 20.2	32.22	1 9.33	13 49.15	0.668
Sun.	23 15 55 8.00	10.560	20 21 2.5	31.29	1 9.44	13 32.72	0.701
Mon.	24 15 59 21.83	10.593	20 33 22.3	30.35	1 9.54	13 15.49	0.734
Tues.	25 16 3 36.45	10.625	20 45 19.3	29.39	1 9.65	12 57.48	0.766
Wed.	26 16 7 51.83	10.656	20 56 53.0	28.42	1 9.75	12 38.70	0.798
Thur.	27 16 12 7.95	10.687	21 8 3.3	27.43	1 9.85	12 19.19	0.828
Frid.	28 16 16 24.79	10.716	21 18 49.7	26.43	1 9.95	11 58.96	0.857
Sat.	29 16 20 42.33	10.745	21 29 11.8	25.41	1 10.04	11 38.03	0.886
Sun.	30 16 25 0.55	10.772	21 39 9.5	24.39	1 10.13	11 16.44	0.913
Mon.	31 16 29 19.41	10.799	S.21 48 42.3	23.34	1 10.22	10 54.19	0.940

* Mean Time of the Semidiameter passing may be found by subtracting 0^s.19 from the Sidereal Time.

AT MEAN NOON.

Date.		THE SUN'S			Equation of Time, to be subtracted from Apparent Time.	Sidereal Time.
		Apparent Right Ascension.	Apparent Declination.	Semi- diameter.*		
		h m s	S. ° ' "	' "	m s	h m s
Sat.	1	14 25 38.20	S. 14 26 10.5	16 8.81	16 20.53	14 41 58.73
Sun.	2	14 29 33.70	14 45 18.0	16 9.06	16 21.58	14 45 55.28
Mon.	3	14 33 30.00	15 4 11.0	16 9.32	16 21.84	14 49 51.84
Tues.	4	14 37 27.09	15 22 49.3	16 9.57	16 21.30	14 53 48.39
Wed.	5	14 41 24.98	15 41 12.2	16 9.82	16 19.96	14 57 44.94
Thur.	6	14 45 23.69	15 59 19.5	16 10.06	16 17.81	15 1 41.50
Frid.	7	14 49 23.21	16 17 10.7	16 10.31	16 14.84	15 5 38.05
Sat.	8	14 53 23.56	16 34 45.4	16 10.55	16 11.05	15 9 34.61
Sun.	9	14 57 24.74	16 52 3.3	16 10.78	16 6.42	15 13 31.16
Mon.	10	15 1 26.77	17 9 4.0	16 11.01	16 0.95	15 17 27.72
Tues.	11	15 5 29.63	17 25 47.0	16 11.24	15 54.64	15 21 24.27
Wed.	12	15 9 33.35	17 42 12.0	16 11.47	15 47.48	15 25 20.83
Thur.	13	15 13 37.92	17 58 18.6	16 11.69	15 39.46	15 29 17.38
Frid.	14	15 17 43.35	18 14 6.4	16 11.90	15 30.59	15 33 13.94
Sat.	15	15 21 49.63	18 29 35.0	16 12.11	15 20.86	15 37 10.49
Sun.	16	15 25 56.77	18 44 44.1	16 12.32	15 10.28	15 41 7.05
Mon.	17	15 30 4.76	18 59 33.3	16 12.52	14 58.84	15 45 3.60
Tues.	18	15 34 13.61	19 14 2.2	16 12.72	14 46.55	15 49 0.16
Wed.	19	15 38 23.30	19 28 10.5	16 12.92	14 33.42	15 52 56.72
Thur.	20	15 42 33.83	19 41 57.7	16 13.11	14 19.44	15 56 53.27
Frid.	21	15 46 45.20	19 55 23.5	16 13.30	14 4.63	16 0 49.83
Sat.	22	15 50 57.38	20 8 27.6	16 13.48	13 49.00	16 4 46.38
Sun.	23	15 55 10.38	20 21 9.5	16 13.67	13 32.56	16 8 42.94
Mon.	24	15 59 24.17	20 33 29.0	16 13.85	13 15.33	16 12 39.50
Tues.	25	16 3 38.74	20 45 25.6	16 14.02	12 57.31	16 16 36.05
Wed.	26	16 7 54.08	20 56 59.0	16 14.20	12 38.53	16 20 32.61
Thur.	27	16 12 10.15	21 8 8.9	16 14.37	12 19.02	16 24 29.17
Frid.	28	16 16 26.93	21 18 54.9	16 14.54	11 58.79	16 28 25.72
Sat.	29	16 20 44.42	21 29 16.7	16 14.71	11 37.86	16 32 22.28
Sun.	30	16 25 2.57	21 39 14.0	16 14.87	11 16.27	16 36 18.84
Mon.	31	16 29 21.37	S. 21 48 46.5	16 15.04	10 54.02	16 40 15.39

* The Semidiameter for *Apparent* Noon may be assumed the same as that for *Mean* Noon.

MEAN TIME.

Day.	THE SUN'S <i>Apparent</i>		Logarithm of the Radius Vector of the Earth.	Transit of the First Point of Aries.	THE MOON'S			
	Longitude.	Latitude.			Semidiameter.		Horizontal Parallax.	
	Noon.	Noon.			Noon.	Midnight.	Noon.	Midnight.
				h m s				
1	218° 47' 43".5	N. 0°.12	9.9965682	9 16 29.86	16 20.35	16 16.20	59 58.02	59 42.80
2	219 47 49.6	N. 0°.01	.9964536	9 12 33.95	16 11.60	16 6.66	59 25.90	59 7.79.
3	220 47 57.2	S. 0°.11	.9963397	9 8 38.04	16 1.51	15 56.25	58 48.88	58 29.56
4	221 48 6.3	0.24	9.9962269	9 4 42.13	15 50.96	15 45.71	58 10.14	57 50.88
5	222 48 16.9	0.37	.9961152	9 0 46.22	15 40.56	15 35.55	57 31.98	57 13.60
6	223 48 29.1	0.50	.9960048	8 56 50.31	15 30.71	15 26.06	56 55.83	56 38.76
7	224 48 42.8	0.61	9.9958959	8 52 54.40	15 21.60	15 17.35	56 22.41	56 6.82
8	225 48 58.0	0.70	.9957886	8 48 58.50	15 13.31	15 9.47	55 51.97	55 37.88
9	226 49 14.9	0.77	.9956831	8 45 2.59	15 5.83	15 2.41	55 24.54	55 11.97
10	227 49 33.3	0.81	9.9955793	8 41 6.68	14 59.20	14 56.22	55 0.19	54 49.23
11	228 49 53.4	0.83	.9954773	8 37 10.77	14 53.47	14 50.98	54 39.16	54 30.04
12	229 50 15.2	0.82	.9953773	8 33 14.86	14 48.78	14 46.89	54 21.96	54 15.02
13	230 50 38.7	0.78	9.9952791	8 29 18.95	14 45.34	14 44.18	54 9.34	54 5.06
14	231 51 4.0	0.72	.9951828	8 25 23.04	14 43.43	14 43.14	54 2.32	54 1.26
15	232 51 31.0	0.64	.9950884	8 21 27.13	14 43.35	14 44.09	54 2.02	54 4.73
16	233 51 59.8	0.54	9.9949959	8 17 31.22	14 45.40	14 47.31	54 9.53	54 16.54
17	234 52 30.3	0.43	.9949051	8 13 35.31	14 49.85	14 53.03	54 25.86	54 37.54
18	235 53 2.7	0.30	.9948161	8 9 39.40	14 56.87	15 1.37	54 51.64	55 8.16
19	236 53 36.8	0.18	9.9947287	8 5 43.49	15 6.52	15 12.30	55 27.06	55 48.25
20	237 54 12.7	S. 0°.06	.9946430	8 1 47.58	15 18.65	15 25.53	56 11.59	56 36.84
21	238 54 50.4	N. 0°.05	.9945588	7 57 51.67	15 32.86	15 40.52	57 3.72	57 31.85
22	239 55 29.8	0.15	9.9944760	7 53 55.76	15 48.40	15 56.35	58 0.77	58 29.94
23	240 56 10.9	0.23	.9943945	7 49 59.85	16 4.20	16 11.78	58 58.77	59 26.56
24	241 56 53.5	0.27	.9943143	7 46 3.94	16 18.87	16 25.30	59 52.60	60 16.17
25	242 57 37.7	0.28	9.9942352	7 42 8.03	16 30.86	16 35.38	60 36.58	60 53.20
26	243 58 23.4	0.27	.9941571	7 38 12.12	16 38.73	16 40.81	61 5.50	61 13.10
27	244 59 10.3	0.22	.9940802	7 34 16.21	16 41.54	16 40.94	61 15.80	61 13.59
28	245 59 58.5	0.13	9.9940043	7 30 20.30	16 39.04	16 35.93	61 6.61	60 55.20
29	247 0 47.8	N. 0°.03	.9939297	7 26 24.39	16 31.75	16 26.65	60 39.85	60 21.14
30	248 1 38.1	S. 0°.09	.9938563	7 22 28.48	16 20.81	16 14.40	59 59.70	59 36.20
31	249 2 29.3	S. 0.22	9.9937844	7 18 32.57	16 7.62	16 0.62	59 11.31	58 45.63

MEAN TIME.

Day.	THE MOON'S						
	Longitude.		Latitude.		Age.	Meridian Passage.	
	Noon.	Midnight.	Noon.	Midnight.	Noon.	Upper.	Lower.
					d	h m	h m
1	276° 53' 27.2	284° 6' 31.9	N. 3° 23' 57.4	N. 2° 54' 19.9	4.21	3 56.8	16 26.6
2	291 15 2.8	298 18 48.0	2 22 14.7	1 48 17.8	5.21	4 55.9	17 24.6
3	305 17 43.5	312 11 52.6	1 13 5.1	N. 0 37 11.1	6.21	5 52.6	18 19.8
4	319 1 23.8	325 46 29.6	N. 0 1 8.9	S. 0 34 30.5	7.21	6 46.3	19 11.9
5	332 27 24.9	339 4 25.8	S. 1 9 18.3	1 42 48.1	8.21	7 36.9	20 1.2
6	345 37 49.0	352 7 49.9	2 14 35.7	2 44 19.4	9.21	8 25.0	20 48.3
7	358 34 42.5	4 58 39.6	3 11 40.0	3 36 20.4	10.21	9 11.2	21 33.9
8	11 19 51.8	17 38 27.5	3 58 6.4	4 16 46.1	11.21	9 56.3	22 18.7
9	23 54 33.8	30 8 15.6	4 32 9.9	4 44 11.1	12.21	10 41.0	23 3.4
10	36 19 37.6	42 28 43.1	4 52 45.0	4 57 49.8	13.21	11 25.8	23 48.4
11	48 35 35.9	54 40 20.0	4 59 25.8	4 57 35.5	14.21	12 11.2	* *
12	60 43 1.0	66 43 46.0	4 52 23.6	4 43 56.7	15.21	12 57.4	0 34.2
13	72 42 43.9	78 40 6.9	4 32 22.9	4 17 51.7	16.21	13 44.3	1 20.7
14	84 36 9.3	90 31 9.0	4 0 34.1	3 40 41.6	17.21	14 31.9	2 8.0
15	96 25 27.1	102 19 27.5	3 18 26.9	2 54 3.4	18.21	15 19.7	2 55.8
16	108 13 38.0	114 8 28.8	2 27 44.9	1 59 45.7	19.21	16 7.5	3 43.6
17	120 4 33.4	126 2 27.8	1 30 20.8	S. 0 59 45.8	20.21	16 55.0	4 31.3
18	132 2 50.1	138 6 20.2	S. 0 28 17.0	N. 0 3 48.3	21.21	17 42.1	5 18.6
19	144 13 38.7	150 25 26.5	N. 0 36 11.7	1 8 33.3	22.21	18 29.0	6 5.5
20	156 42 24.1	163 5 9.6	1 40 31.8	2 11 44.0	23.21	19 16.0	6 52.5
21	169 34 18.2	176 10 20.0	2 41 44.7	3 10 7.0	24.21	20 3.9	7 39.8
22	182 53 38.8	189 44 29.9	3 36 22.0	3 59 59.6	25.21	20 53.2	8 28.3
23	196 42 58.3	203 48 57.4	4 20 29.2	4 37 20.2	26.21	21 44.9	9 18.7
24	211 2 7.4	218 21 54.2	4 50 3.8	4 58 14.3	27.21	22 39.6	10 11.8
25	225 47 30.4	233 17 55.4	5 1 30.6	4 59 38.3	28.21	23 37.6	11 8.2
26	240 51 57.8	248 28 18.4	4 52 30.7	4 40 10.1	29.21	* *	12 7.8
27	256 5 33.4	263 42 19.0	4 22 48.2	4 0 45.5	0.78	0 38.6	13 9.8
28	271 17 14.6	278 49 7.4	3 34 30.5	3 4 38.5	1.78	1 41.3	14 12.6
29	286 16 54.0	293 39 43.2	2 31 49.3	1 56 45.5	2.78	2 43.7	15 14.2
30	300 56 56.4	308 8 7.7	1 20 10.1	N. 0 42 45.3	3.78	3 43.9	16 12.8
31	315 13 2.9	322 11 38.8	N. 0 5 11.0	S. 0 31 56.2	4.78	4 40.7	17 7.7

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
SATURDAY 1.					MONDAY 3.				
	h m s	s				h m s	s		
0	18 29 15.98	25.718	S. 19 52' 22".8	5.09	0	20 29 22.60	24.078	S. 17 46' 9".7	54.95
1	18 31 50.24	25.702	19 52 49.2	3.70	1	20 31 46.92	24.030	17 40 36.8	56.00
2	18 34 24.40	25.684	19 53 7.2	2.32	2	20 34 10.96	23.983	17 34 57.7	57.03
3	18 36 58.45	25.666	19 53 17.0	0.94	3	20 36 34.72	23.936	17 29 12.5	58.05
4	18 39 32.39	25.647	19 53 18.5	0.43	4	20 38 58.19	23.888	17 23 21.1	59.08
5	18 42 6.21	25.627	19 53 11.8	1.81	5	20 41 21.37	23.840	17 17 23.6	60.08
6	18 44 39.91	25.606	19 52 56.8	3.18	6	20 43 44.27	23.793	17 11 20.1	61.08
7	18 47 13.48	25.584	19 52 33.7	4.54	7	20 46 6.88	23.744	17 5 10.7	62.06
8	18 49 46.92	25.562	19 52 2.3	5.91	8	20 48 29.20	23.696	16 58 55.4	63.03
9	18 52 20.22	25.538	19 51 22.8	7.26	9	20 50 51.23	23.648	16 52 34.3	63.99
10	18 54 53.37	25.513	19 50 35.2	8.62	10	20 53 12.97	23.599	16 46 7.5	64.94
11	18 57 26.38	25.488	19 49 39.4	9.97	11	20 55 34.42	23.551	16 39 35.0	65.89
12	18 59 59.23	25.461	19 48 35.6	11.31	12	20 57 55.58	23.502	16 32 56.8	66.83
13	19 2 31.91	25.434	19 47 23.7	12.65	13	21 0 16.44	23.453	16 26 13.1	67.73
14	19 5 4.44	25.407	19 46 3.8	13.98	14	21 2 37.01	23.404	16 19 24.0	68.64
15	19 7 36.79	25.378	19 44 35.9	15.31	15	21 4 57.29	23.355	16 12 29.4	69.55
16	19 10 8.97	25.348	19 43 0.1	16.63	16	21 7 17.27	23.306	16 5 29.4	70.43
17	19 12 40.97	25.318	19 41 16.4	17.95	17	21 9 36.96	23.258	15 58 24.2	71.31
18	19 15 12.79	25.288	19 39 24.7	19.27	18	21 11 56.36	23.208	15 51 13.7	72.18
19	19 17 44.42	25.256	19 37 25.2	20.57	19	21 14 15.46	23.159	15 43 58.0	73.03
20	19 20 15.86	25.223	19 35 17.9	21.86	20	21 16 34.27	23.111	15 36 37.3	73.88
21	19 22 47.10	25.190	19 33 2.9	23.15	21	21 18 52.79	23.062	15 29 11.5	74.72
22	19 25 18.14	25.157	19 30 40.1	24.44	22	21 21 11.01	23.013	15 21 40.7	75.54
23	19 27 48.98	25.122	S. 19 28 9.6	25.72	23	21 23 28.95	22.965	S. 15 14 5.0	76.35
SUNDAY 2.					TUESDAY 4.				
	h m s	s				h m s	s		
0	19 30 19.60	25.086	S. 19 25 31.5	26.98	0	21 25 46.59	22.916	S. 15 6 24.5	77.14
1	19 32 50.01	25.050	19 22 45.8	28.25	1	21 28 3 94	22.868	14 58 39.3	77.93
2	19 35 20.20	25.013	19 19 52.5	29.51	2	21 30 21.00	22.819	14 50 49.3	78.73
3	19 37 50.17	24.976	19 16 51.7	30.75	3	21 32 37.77	22.771	14 42 54.6	79.49
4	19 40 19.91	24.938	19 13 43.5	31.99	4	21 34 54.25	22.723	14 34 55.4	80.24
5	19 42 49.43	24.900	19 10 27.8	33.23	5	21 37 10.44	22.675	14 26 51.7	80.98
6	19 45 18.71	24.861	19 7 4.7	34.45	6	21 39 26.35	22.628	14 18 43.6	81.73
7	19 47 47.76	24.822	19 3 34.4	35.67	7	21 41 41.97	22.579	14 10 31.0	82.45
8	19 50 16.57	24.782	18 59 56.7	36.88	8	21 43 57.30	22.532	14 2 14.2	83.16
9	19 52 45.14	24.741	18 56 11.9	38.07	9	21 46 12.35	22.485	13 53 53.1	83.88
10	19 55 13.46	24.699	18 52 19.9	39.27	10	21 48 27.12	22.438	13 45 27.7	84.57
11	19 57 41.53	24.658	18 48 20.7	40.45	11	21 50 41.60	22.391	13 36 58.3	85.24
12	20 0 9.35	24.615	18 44 14.5	41.62	12	21 52 55.81	22.345	13 28 24.8	85.92
13	20 2 36.91	24.573	18 40 1.3	42.78	13	21 55 9.74	22.298	13 19 47.3	86.58
14	20 5 4.22	24.529	18 35 41.2	43.93	14	21 57 23.39	22.252	13 11 5.9	87.22
15	20 7 31.26	24.486	18 31 14.1	45.08	15	21 59 36.76	22.206	13 2 20.7	87.86
16	20 9 58.05	24.443	18 26 40.2	46.22	16	22 1 49.86	22.161	12 53 31.6	88.49
17	20 12 24.57	24.398	18 21 59.5	47.34	17	22 4 2.69	22.115	12 44 38.8	89.11
18	20 14 50.82	24.353	18 17 12.1	48.45	18	22 6 15.24	22.070	12 35 42.3	89.72
19	20 17 16.80	24.308	18 12 18.1	49.56	19	22 8 27.53	22.026	12 26 42.2	90.32
20	20 19 42.51	24.262	18 7 17.4	50.67	20	22 10 39.55	21.981	12 17 38.5	90.90
21	20 22 7.94	24.217	18 2 10.1	51.75	21	22 12 51.30	21.937	12 8 31.4	91.48
22	20 24 33.11	24.171	17 56 56.4	52.83	22	22 15 2.79	21.893	11 59 20.8	92.04
23	20 26 57.99	24.124	17 51 36.2	53.89	23	22 17 14.02	21.850	11 50 6.9	92.59
24	20 29 22.60	24.078	S. 17 46 9.7	54.95	24	22 19 24.99	21.807	S. 11 40 49.7	93.14

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
WEDNESDAY 5.					FRIDAY 7.				
	h m s	s	S. ° ' "	" "		h m s	s	S. ° ' "	" "
0	22 19 24.99	21.807	S. 11 40 49.7	93.14	0	23 59 52.41	20.221	S. 3 29 45.6	107.88
1	22 21 35.70	21.763	11 31 29.2	93.68	1	0 1 53.67	20.198	3 18 58.1	107.96
2	22 23 46.15	21.721	11 22 5.6	94.20	2	0 3 54.79	20.177	3 8 10.1	108.04
3	22 25 56.35	21.679	11 12 38.8	94.72	3	0 5 55.79	20.157	2 57 21.6	108.11
4	22 28 6.30	21.638	11 3 9.0	95.22	4	0 7 56.67	20.137	2 46 32.8	108.17
5	22 30 16.00	21.596	10 53 36.2	95.71	5	0 9 57.43	20.116	2 35 43.6	108.23
6	22 32 25.45	21.554	10 44 0.5	96.18	6	0 11 58.06	20.097	2 24 54.1	108.27
7	22 34 34.65	21.514	10 34 22.0	96.66	7	0 13 58.59	20.078	2 14 4.4	108.30
8	22 36 43.62	21.474	10 24 40.6	97.13	8	0 15 59.00	20.059	2 3 14.5	108.33
9	22 38 52.34	21.433	10 14 56.4	97.58	9	0 17 59.30	20.041	1 52 24.5	108.35
10	22 41 0.82	21.394	10 5 9.6	98.03	10	0 19 59.49	20.023	1 41 34.3	108.37
11	22 43 9.07	21.356	9 55 20.1	98.46	11	0 21 59.58	20.007	1 30 44.1	108.37
12	22 45 17.09	21.318	9 45 28.1	98.88	12	0 23 59.57	19.990	1 19 53.9	108.36
13	22 47 24.88	21.278	9 35 33.6	99.29	13	0 25 59.46	19.973	1 9 3.8	108.35
14	22 49 32.43	21.240	9 25 36.6	99.70	14	0 27 59.25	19.958	0 58 13.7	108.33
15	22 51 39.76	21.203	9 15 37.2	100.09	15	0 29 58.96	19.943	0 47 23.9	108.29
16	22 53 46.87	21.167	9 5 35.5	100.48	16	0 31 58.57	19.928	0 36 34.2	108.27
17	22 55 53.76	21.130	8 55 31.5	100.85	17	0 33 58.09	19.913	0 25 44.7	108.23
18	22 58 0.43	21.094	8 45 25.3	101.22	18	0 35 57.53	19.900	0 14 55.5	108.17
19	23 0 6.89	21.058	8 35 16.9	101.58	19	0 37 56.89	19.887	S. 0 4 6.7	108.10
20	23 2 13.13	21.023	8 25 6.4	101.92	20	0 39 56.17	19.873	N. 0 6 41.7	108.03
21	23 4 19.16	20.988	8 14 53.9	102.25	21	0 41 55.37	19.861	0 17 29.7	107.97
22	23 6 24.98	20.953	8 4 39.4	102.58	22	0 43 54.50	19.849	0 28 17.3	107.88
23	23 8 30.60	20.919	S. 7 54 23.0	102.89	23	0 45 53.56	19.837	N. 0 39 4.3	107.78
THURSDAY 6.					SATURDAY 8.				
	h m s	s	S. ° ' "	" "		h m s	s	N. ° ' "	" "
0	23 10 36.01	20.886	S. 7 44 4.7	103.21	0	0 47 52.54	19.826	N. 0 49 50.7	107.69
1	23 12 41.23	20.853	7 33 44.5	103.51	1	0 49 51.47	19.816	1 0 36.6	107.58
2	23 14 46.25	20.820	7 23 22.6	103.79	2	0 51 50.33	19.804	1 11 21.7	107.47
3	23 16 51.07	20.788	7 12 59.0	104.07	3	0 53 49.12	19.794	1 22 6.2	107.35
4	23 18 55.71	20.757	7 2 33.8	104.34	4	0 55 47.86	19.786	1 32 49.9	107.22
5	23 21 0.15	20.724	6 52 6.9	104.60	5	0 57 46.55	19.777	1 43 32.8	107.08
6	23 23 4.40	20.694	6 41 38.6	104.85	6	0 59 45.18	19.768	1 54 14.9	106.94
7	23 25 8.48	20.664	6 31 8.7	105.10	7	1 1 43.76	19.760	2 4 56.1	106.78
8	23 27 12.37	20.634	6 20 37.4	105.33	8	1 3 42.30	19.753	2 15 36.3	106.63
9	23 29 16.09	20.605	6 10 4.7	105.56	9	1 5 40.79	19.744	2 26 15.6	106.46
10	23 31 19.63	20.576	5 59 30.7	105.78	10	1 7 39.23	19.738	2 36 53.8	106.28
11	23 33 23.00	20.548	5 48 55.4	105.98	11	1 9 37.64	19.732	2 47 31.0	106.10
12	23 35 26.20	20.519	5 38 19.0	106.18	12	1 11 36.01	19.725	2 58 7.0	105.91
13	23 37 29.23	20.492	5 27 41.3	106.37	13	1 13 34.34	19.719	3 8 41.9	105.73
14	23 39 32.10	20.465	5 17 2.6	106.54	14	1 15 32.64	19.715	3 19 15.7	105.52
15	23 41 34.81	20.438	5 6 22.8	106.72	15	1 17 30.92	19.711	3 29 48.1	105.30
16	23 43 37.36	20.412	4 55 42.0	106.88	16	1 19 29.16	19.705	3 40 19.3	105.09
17	23 45 39.75	20.386	4 45 0.2	107.03	17	1 21 27.38	19.701	3 50 49.2	104.86
18	23 47 41.99	20.361	4 34 17.6	107.18	18	1 23 25.57	19.697	4 1 17.6	104.63
19	23 49 44.08	20.337	4 23 34.1	107.32	19	1 25 23.74	19.693	4 11 44.7	104.39
20	23 51 46.03	20.313	4 12 49.8	107.45	20	1 27 21.89	19.691	4 22 10.3	104.14
21	23 53 47.83	20.289	4 2 4.7	107.57	21	1 29 20.03	19.689	4 32 34.4	103.88
22	23 55 49.50	20.266	3 51 19.0	107.68	22	1 31 18.16	19.687	4 42 56.9	103.63
23	23 57 51.02	20.243	3 40 32.6	107.78	23	1 33 16.27	19.684	4 53 17.9	103.36
24	23 59 52.41	20.221	S. 3 29 45.6	107.88	24	1 35 14.37	19.683	N. 5 3 37.2	103.08

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in rom.	Declination.	Var. in rom.	Hour.	Right Ascension.	Var. in rom.	Declination.	Var. in rom.
SUNDAY 9.					TUESDAY 11.				
	h m s	s	N. ° ' "	103 ° 08		h m s	s	N. ° ' "	81 ° 98
0	1 35 14.37	19.683	5 3 37.2	102.79	0	3 10 10.01	19.971	12 33 44.4	81.38
1	1 37 12.47	19.683	5 13 54.8	102.51	1	3 12 9.87	19.983	12 41 54.5	80.79
2	1 39 10.56	19.681	5 24 10.7	101.91	2	3 14 9.81	19.995	12 50 1.0	80.19
3	1 41 8.65	19.681	5 34 24.9	101.59	3	3 16 9.81	20.006	12 58 4.0	79.58
4	1 43 6.73	19.681	5 44 37.3	101.28	4	3 18 9.88	20.018	13 6 3.3	78.96
5	1 45 4.82	19.681	5 54 47.8	100.95	5	3 20 10.02	20.030	13 13 58.9	78.34
6	1 47 2.91	19.683	6 4 56.4	100.62	6	3 22 10.24	20.043	13 21 50.8	77.72
7	1 49 1.01	19.683	6 15 3.1	99.94	7	3 24 10.53	20.054	13 29 39.0	77.08
8	1 50 59.11	19.685	6 25 7.8	99.58	8	3 26 10.89	20.066	13 37 23.4	76.44
9	1 52 57.23	19.687	6 35 10.5	99.23	9	3 28 11.32	20.078	13 45 4.0	75.80
10	1 54 55.35	19.688	6 45 11.2	98.87	10	3 30 11.83	20.092	13 52 40.7	75.16
11	1 56 53.49	19.692	6 55 9.8	98.49	11	3 32 12.42	20.104	14 0 13.6	74.50
12	1 58 51.65	19.694	7 5 6.2	98.11	12	3 34 13.08	20.117	14 7 42.6	73.84
13	2 0 49.82	19.698	7 15 0.5	97.72	13	3 36 13.82	20.130	14 15 7.6	73.18
14	2 2 48.02	19.701	7 24 52.6	97.33	14	3 38 14.64	20.143	14 22 28.7	72.51
15	2 4 46.23	19.704	7 34 42.4	96.93	15	3 40 15.53	20.155	14 29 45.8	71.83
16	2 6 44.47	19.708	7 44 29.9	96.53	16	3 42 16.50	20.168	14 36 58.8	71.15
17	2 8 42.73	19.713	7 54 15.0	96.12	17	3 44 17.54	20.181	14 44 7.7	70.47
18	2 10 41.02	19.718	8 3 57.8	95.70	18	3 46 18.67	20.194	14 51 12.6	69.78
19	2 12 39.34	19.723	8 13 38.2	95.27	19	3 48 19.87	20.207	14 58 13.3	69.08
20	2 14 37.69	19.728	8 23 16.1	94.83	20	3 50 21.15	20.220	15 5 9.9	68.38
21	2 16 36.07	19.733	8 32 51.6		21	3 52 22.51	20.233	15 12 2.3	67.68
22	2 18 34.49	19.739	8 42 24.5		22	3 54 23.95	20.247	15 18 50.5	66.97
23	2 20 32.94	19.744	N. 8 51 54.8		23	3 56 25.47	20.260	N. 15 25 34.4	
MONDAY 10.					WEDNESDAY 12.				
	h m s	s	N. ° ' "	94.40		h m s	s	N. ° ' "	66.25
0	2 22 31.42	19.751	9 1 22.5	93.96	0	3 58 27.07	20.273	15 32 14.1	65.53
1	2 24 29.95	19.758	9 10 47.6	93.50	1	4 0 28.74	20.286	15 38 49.4	64.81
2	2 26 28.52	19.765	9 20 10.0	93.03	2	4 2 30.50	20.299	15 45 20.5	64.08
3	2 28 27.13	19.772	9 29 29.6	92.58	3	4 4 32.33	20.313	15 51 47.1	63.35
4	2 30 25.78	19.778	9 38 46.4	92.11	4	4 6 34.25	20.326	15 58 9.4	62.61
5	2 32 24.47	19.787	9 48 0.5	91.63	5	4 8 36.24	20.338	16 4 27.3	61.86
6	2 34 23.22	19.795	9 57 11.7	91.14	6	4 10 38.31	20.352	16 10 40.7	61.12
7	2 36 22.01	19.803	10 6 20.0	90.66	7	4 12 40.46	20.365	16 16 49.6	60.37
8	2 38 20.85	19.811	10 15 25.4	90.16	8	4 14 42.69	20.378	16 22 54.1	59.60
9	2 40 19.74	19.819	10 24 27.9	89.66	9	4 16 44.99	20.391	16 28 54.0	58.84
10	2 42 18.68	19.828	10 33 27.3	89.15	10	4 18 47.38	20.404	16 34 49.3	58.08
11	2 44 17.68	19.838	10 42 23.8	88.63	11	4 20 49.84	20.417	16 40 40.1	57.32
12	2 46 16.73	19.847	10 51 17.1	88.11	12	4 22 52.38	20.430	16 46 26.3	56.53
13	2 48 15.84	19.856	11 0 7.3	87.58	13	4 24 55.00	20.443	16 52 7.9	55.75
14	2 50 15.00	19.865	11 8 54.4	87.05	14	4 26 57.69	20.455	16 57 44.7	54.98
15	2 52 14.22	19.875	11 17 38.3	86.52	15	4 29 0.46	20.468	17 3 16.9	54.19
16	2 54 13.50	19.885	11 26 19.0	85.97	16	4 31 3.31	20.481	17 8 44.4	53.40
17	2 56 12.84	19.896	11 34 56.5	85.41	17	4 33 6.23	20.493	17 14 7.2	52.61
18	2 58 12.25	19.906	11 43 30.6	84.86	18	4 35 9.22	20.505	17 19 25.2	51.81
19	3 0 11.71	19.916	11 52 1.4	84.29	19	4 37 12.29	20.518	17 24 38.5	51.00
20	3 2 11.24	19.927	12 0 28.9	83.73	20	4 39 15.44	20.531	17 29 46.9	50.20
21	3 4 10.83	19.938	12 8 52.9	83.15	21	4 41 18.66	20.543	17 34 50.5	49.39
22	3 6 10.49	19.949	12 17 13.6	82.57	22	4 43 21.95	20.554	17 39 49.3	48.58
23	3 8 10.22	19.960	12 25 30.7	81.98	23	4 45 25.31	20.566	17 44 43.2	47.76
24	3 10 10.01	19.971	N. 12 33 44.4		24	4 47 28.74	20.578	N. 17 49 32.2	

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
THURSDAY 13.					SATURDAY 15.				
	h m s	s	N. 17 49 32.2	47.76		h m s	s	N. 19 59 14.9	5.49
0	4 47 28.74	20.578			0	6 27 18.34	20.939		
1	4 49 32.25	20.590	17 54 16.3	46.94	1	6 29 23.98	20.941	19 59 45.1	4.57
2	4 51 35.82	20.602	17 58 55.5	46.12	2	6 31 29.63	20.943	20 0 9.7	3.64
3	4 53 39.47	20.613	18 3 29.7	45.29	3	6 33 35.30	20.945	20 0 28.8	2.73
4	4 55 43.18	20.624	18 7 59.0	44.46	4	6 35 40.97	20.947	20 0 42.4	1.81
5	4 57 46.96	20.636	18 12 23.2	43.62	5	6 37 46.66	20.948	20 0 50.5	0.89
6	4 59 50.81	20.647	18 16 42.4	42.78	6	6 39 52.35	20.948	20 0 53.1	0.02
7	5 1 54.72	20.658	18 20 56.6	41.95	7	6 41 58.04	20.950	20 0 50.2	0.95
8	5 3 58.70	20.668	18 25 5.8	41.10	8	6 44 3.75	20.951	20 0 41.7	1.88
9	5 6 2.74	20.678	18 29 9.8	40.25	9	6 46 9.45	20.951	20 0 27.7	2.80
10	5 8 6.84	20.689	18 33 8.8	39.41	10	6 48 15.16	20.951	20 0 8.1	3.72
11	5 10 11.01	20.700	18 37 2.7	38.55	11	6 50 20.86	20.951	19 59 43.1	4.63
12	5 12 15.24	20.709	18 40 51.4	37.69	12	6 52 26.57	20.952	19 59 12.5	5.56
13	5 14 19.52	20.719	18 44 35.0	36.84	13	6 54 32.28	20.951	19 58 36.4	6.48
14	5 16 23.87	20.730	18 48 13.5	35.98	14	6 56 37.98	20.949	19 57 54.8	7.39
15	5 18 28.28	20.739	18 51 46.8	35.11	15	6 58 43.67	20.949	19 57 7.7	8.32
16	5 20 32.74	20.748	18 55 14.8	34.24	16	7 0 49.37	20.948	19 56 15.0	9.23
17	5 22 37.26	20.758	18 58 37.7	33.38	17	7 2 55.05	20.946	19 55 16.9	10.15
18	5 24 41.83	20.766	19 1 55.3	32.50	18	7 5 0.72	20.945	19 54 13.2	11.08
19	5 26 46.45	20.775	19 5 7.7	31.63	19	7 7 6.39	20.944	19 53 4.0	11.99
20	5 28 51.13	20.784	19 8 14.9	30.76	20	7 9 12.05	20.942	19 51 49.3	12.90
21	5 30 55.86	20.793	19 11 16.8	29.88	21	7 11 17.69	20.939	19 50 29.2	13.82
22	5 33 0.64	20.801	19 14 13.4	28.99	22	7 13 23.32	20.938	19 49 3.5	14.74
23	5 35 5.47	20.809	N. 19 17 4.7	28.11	23	7 15 28.94	20.935	N. 19 47 32.3	15.66
FRIDAY 14.					SUNDAY 16.				
	h m s	s	N. 19 19 50.7	27.23		h m s	s	N. 19 45 55.6	16.57
0	5 37 10.35	20.817			0	7 17 34.54	20.932		
1	5 39 15.27	20.824	19 22 31.4	26.33	1	7 19 40.12	20.929	19 44 13.5	17.48
2	5 41 20.24	20.832	19 25 6.7	25.44	2	7 21 45.69	20.926	19 42 25.9	18.39
3	5 43 25.25	20.839	19 27 36.7	24.56	3	7 23 51.23	20.923	19 40 32.8	19.30
4	5 45 30.31	20.846	19 30 1.4	23.66	4	7 25 56.76	20.920	19 38 34.3	20.21
5	5 47 35.40	20.853	19 32 20.6	22.76	5	7 28 2.27	20.917	19 36 30.3	21.13
6	5 49 40.54	20.859	19 34 34.5	21.87	6	7 30 7.76	20.913	19 34 20.8	22.03
7	5 51 45.71	20.866	19 36 43.0	20.97	7	7 32 13.22	20.908	19 32 5.9	22.93
8	5 53 50.93	20.873	19 38 46.1	20.07	8	7 34 18.66	20.904	19 29 45.6	23.84
9	5 55 56.18	20.878	19 40 43.8	19.17	9	7 36 24.07	20.900	19 27 19.8	24.74
10	5 58 1.46	20.883	19 42 36.1	18.27	10	7 38 29.46	20.897	19 24 48.7	25.64
11	6 0 6.78	20.889	19 44 23.0	17.36	11	7 40 34.83	20.892	19 22 12.1	26.55
12	6 2 12.13	20.894	19 46 4.4	16.45	12	7 42 40.16	20.887	19 19 30.1	27.45
13	6 4 17.51	20.899	19 47 40.4	15.54	13	7 44 45.47	20.883	19 16 42.7	28.34
14	6 6 22.92	20.904	19 49 10.9	14.63	14	7 46 50.76	20.878	19 13 50.0	29.23
15	6 8 28.36	20.908	19 50 36.0	13.73	15	7 48 56.01	20.873	19 10 51.9	30.13
16	6 10 33.82	20.913	19 51 55.6	12.81	16	7 51 1.23	20.868	19 7 48.4	31.03
17	6 12 39.31	20.918	19 53 9.7	11.90	17	7 53 6.42	20.863	19 4 39.5	31.92
18	6 14 44.83	20.921	19 54 18.4	10.98	18	7 55 11.58	20.857	19 1 25.4	32.80
19	6 16 50.36	20.924	19 55 21.5	10.07	19	7 57 16.70	20.852	18 58 5.9	33.69
20	6 18 55.92	20.928	19 56 19.2	9.16	20	7 59 21.80	20.847	18 54 41.1	34.58
21	6 21 1.50	20.932	19 57 11.4	8.24	21	8 1 26.86	20.841	18 51 10.9	35.47
22	6 23 7.10	20.934	19 57 58.1	7.32	22	8 3 31.89	20.835	18 47 35.5	36.34
23	6 25 12.71	20.937	19 58 39.2	6.40	23	8 5 36.88	20.828	18 43 54.8	37.23
24	6 27 18.34	20.939	N. 19 59 14.9	5.49	24	8 7 41.83	20.823	N. 18 40 8.8	38.10

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
MONDAY 17.					WEDNESDAY 19.				
	h m s	s	N. 18° 40' 8" 8	38.10		h m s	s	N. 14° 1' 9" 2	76.95
0	8 7 41.83	20.823	18 36 17.6	38.98	0	9 46 57.97	20.566	13 53 25.4	77.67
1	8 9 46.76	20.818	18 32 21.1	39.85	1	9 49 1.36	20.564	13 45 37.2	78.40
2	8 11 51.64	20.811	18 28 19.4	40.73	2	9 51 4.74	20.562	13 37 44.6	79.12
3	8 13 56.49	20.805	18 24 12.4	41.59	3	9 53 8.10	20.559	13 29 47.8	79.82
4	8 16 1.30	20.799	18 20 0.3	42.45	4	9 55 11.45	20.558	13 21 46.8	80.53
5	8 18 6.08	20.793	18 15 43.0	43.32	5	9 57 14.79	20.557	13 13 41.5	81.24
6	8 20 10.82	20.787	18 11 20.5	44.18	6	9 59 18.13	20.555	13 5 31.9	81.94
7	8 22 15.52	20.780	18 6 52.8	45.04	7	10 1 21.45	20.554	12 57 18.2	82.63
8	8 24 20.18	20.774	18 2 20.0	45.90	8	10 3 24.78	20.554	12 49 0.4	83.32
9	8 26 24.81	20.768	17 57 42.0	46.75	9	10 5 28.10	20.553	12 40 38.4	84.02
10	8 28 29.40	20.762	17 52 59.0	47.60	10	10 7 31.41	20.553	12 32 12.2	84.70
11	8 30 33.95	20.755	17 48 10.8	48.46	11	10 9 34.73	20.553	12 23 42.0	85.37
12	8 32 38.46	20.749	17 43 17.5	49.30	12	10 11 38.05	20.553	12 15 7.8	86.03
13	8 34 42.94	20.743	17 38 19.2	50.14	13	10 13 41.37	20.554	12 6 29.6	86.71
14	8 36 47.37	20.736	17 33 15.8	50.98	14	10 15 44.70	20.556	11 57 47.3	87.38
15	8 38 51.77	20.730	17 28 7.4	51.82	15	10 17 48.04	20.557	11 49 1.1	88.03
16	8 40 56.13	20.723	17 22 54.0	52.65	16	10 19 51.38	20.558	11 40 10.9	88.69
17	8 43 0.45	20.718	17 17 35.6	53.49	17	10 21 54.73	20.560	11 31 16.8	89.33
18	8 45 4.74	20.712	17 12 12.1	54.33	18	10 23 58.10	20.563	11 22 18.9	89.97
19	8 47 8.99	20.705	17 6 43.7	55.14	19	10 26 1.48	20.564	11 13 17.1	90.63
20	8 49 13.20	20.699	16 55 32.1	56.79	20	10 28 4.87	20.568	11 4 11.4	91.26
21	8 51 17.38	20.693	16 49 48.9	57.61	21	10 30 8.29	20.571	10 55 2.0	91.88
22	8 53 21.51	20.686			22	10 32 11.72	20.574		
23	8 55 25.61	20.680			23	10 34 15.18	20.578		
TUESDAY 18.					THURSDAY 20.				
	h m s	s	N. 16° 44' 0" 8	58.43		h m s	s	N. 10° 36' 31" 8	93.13
0	8 57 29.67	20.674	16 38 7.8	59.23	0	10 36 18.66	20.583	10 27 11.2	93.74
1	8 59 33.70	20.669	16 32 10.0	60.04	1	10 38 22.17	20.587	10 17 46.9	94.35
2	9 1 37.70	20.663	16 26 7.3	60.85	2	10 40 25.70	20.592	10 8 19.0	94.95
3	9 3 41.66	20.657	16 19 59.8	61.65	3	10 42 29.27	20.598	9 58 47.5	95.56
4	9 5 45.58	20.651	16 13 47.5	62.44	4	10 44 32.87	20.603	9 49 12.3	96.15
5	9 7 49.47	20.646	16 7 30.5	63.24	5	10 46 36.50	20.608	9 39 33.7	96.73
6	9 9 53.33	20.640	16 1 8.6	64.04	6	10 48 40.17	20.615	9 29 51.5	97.32
7	9 11 57.15	20.634	15 54 42.0	64.83	7	10 50 43.88	20.622	9 20 5.9	97.89
8	9 14 0.94	20.629	15 48 10.7	65.61	8	10 52 47.63	20.629	9 10 16.8	98.47
9	9 16 4.70	20.625	15 41 34.7	66.39	9	10 54 51.43	20.637	9 0 24.3	99.03
10	9 18 8.44	20.620	15 34 54.0	67.17	10	10 56 55.27	20.645	8 50 28.4	99.59
11	9 20 12.14	20.614	15 28 8.7	67.94	11	10 58 59.17	20.653	8 40 29.2	100.14
12	9 22 15.81	20.610	15 21 18.7	68.72	12	11 1 3.11	20.662	8 30 26.7	100.68
13	9 24 19.46	20.605	15 14 24.1	69.48	13	11 3 7.11	20.671	8 20 21.0	101.23
14	9 26 23.07	20.600	15 7 24.9	70.24	14	11 5 11.16	20.680	8 10 12.0	101.77
15	9 28 26.66	20.597	14 53 12.9	71.00	15	11 7 15.27	20.690	7 59 59.8	102.29
16	9 30 30.23	20.593	14 46 0.0	71.77	16	11 9 19.44	20.701	7 49 44.5	102.82
17	9 32 33.77	20.588	14 38 42.7	72.52	17	11 11 23.68	20.712	7 39 26.0	103.33
18	9 34 37.29	20.584	14 31 20.9	73.26	18	11 13 27.98	20.723	7 29 4.5	103.83
19	9 36 40.78	20.581	14 23 54.6	74.01	19	11 15 32.36	20.735	7 18 40.0	104.34
20	9 38 44.26	20.578	14 16 23.9	74.75	20	11 17 36.80	20.746	7 8 12.4	104.85
21	9 40 47.72	20.574	14 8 48.8	75.48	21	11 19 41.31	20.759	6 57 41.8	105.33
22	9 42 51.15	20.571		76.23	22	11 21 45.91	20.773	6 47 8.4	105.82
23	9 44 54.57	20.568			23	11 23 50.58	20.786		
24	9 46 57.97	20.566			24	11 25 55.34	20.800		

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
FRIDAY 21.					SUNDAY 23.				
	h m s	s	N. ° ' "	106.° 30		h m s	s	S. ° ' "	119.° 39
0	11 25 55.34	20.800	N. 6 36 32.0	106.° 30	0	13 8 16.77	22.043	S. 2 33 37.2	119.° 39
1	11 28 0.18	20.813	6 25 52.8	106.77	1	13 10 29.14	22.081	2 45 33.6	119.42
2	11 30 5.10	20.828	6 15 10.8	107.23	2	13 12 41.74	22.120	2 57 30.2	119.44
3	11 32 10.12	20.844	6 4 26.1	107.68	3	13 14 54.58	22.159	3 9 26.9	119.44
4	11 34 15.23	20.859	5 53 38.6	108.13	4	13 17 7.65	22.198	3 21 23.5	119.43
5	11 36 20.43	20.876	5 42 48.5	108.58	5	13 19 20.96	22.238	3 33 20.0	119.40
6	11 38 25.74	20.893	5 31 55.7	109.02	6	13 21 34.51	22.279	3 45 16.3	119.36
7	11 40 31.14	20.909	5 21 0.3	109.44	7	13 23 48.31	22.321	3 57 12.3	119.31
8	11 42 36.65	20.928	5 10 2.4	109.86	8	13 26 2.36	22.362	4 9 8.0	119.25
9	11 44 42.27	20.945	4 59 2.0	110.28	9	13 28 16.65	22.403	4 21 3.3	119.18
10	11 46 47.99	20.963	4 47 59.1	110.68	10	13 30 31.20	22.447	4 32 58.1	119.08
11	11 48 53.83	20.983	4 36 53.9	111.08	11	13 32 46.01	22.489	4 44 52.3	118.98
12	11 50 59.79	21.003	4 25 46.2	111.47	12	13 35 1.07	22.533	4 56 45.8	118.86
13	11 53 5.86	21.023	4 14 36.3	111.84	13	13 37 16.40	22.577	5 8 38.6	118.73
14	11 55 12.06	21.043	4 3 24.1	112.22	14	13 39 31.99	22.621	5 20 30.6	118.59
15	11 57 18.38	21.064	3 52 9.7	112.58	15	13 41 47.85	22.665	5 32 21.7	118.43
16	11 59 24.83	21.086	3 40 53.1	112.94	16	13 44 3.97	22.710	5 44 11.8	118.26
17	12 1 31.41	21.108	3 29 34.4	113.29	17	13 46 20.37	22.756	5 56 0.8	118.08
18	12 3 38.12	21.130	3 18 13.6	113.63	18	13 48 37.04	22.801	6 7 48.7	117.88
19	12 5 44.97	21.153	3 6 50.8	113.97	19	13 50 53.98	22.848	6 19 35.4	117.67
20	12 7 51.96	21.177	2 55 26.0	114.29	20	13 53 11.21	22.894	6 31 20.7	117.43
21	12 9 59.09	21.201	2 43 59.3	114.60	21	13 55 28.71	22.941	6 43 4.6	117.19
22	12 12 6.37	21.226	2 32 30.8	114.91	22	13 57 46.50	22.988	6 54 47.0	116.93
23	12 14 13.80	21.250	N. 2 21 0.4	115.21	23	14 0 4.57	23.036	S. 7 6 27.8	116.67
SATURDAY 22.					MONDAY 24.				
	h m s	s	N. ° ' "	115.49		h m s	s	S. ° ' "	116.38
0	12 16 21.37	21.276	N. 2 9 28.3	115.49	0	14 2 22.93	23.084	S. 7 18 7.0	116.38
1	12 18 29.11	21.303	1 57 54.5	115.78	1	14 4 41.58	23.133	7 29 44.4	116.08
2	12 20 37.00	21.328	1 46 19.0	116.04	2	14 7 0.52	23.181	7 41 19.9	115.76
3	12 22 45.05	21.356	1 34 42.0	116.30	3	14 9 19.75	23.230	7 52 53.5	115.43
4	12 24 53.27	21.383	1 23 3.4	116.56	4	14 11 39.28	23.279	8 4 25.1	115.08
5	12 27 1.65	21.411	1 11 23.3	116.80	5	14 13 59.10	23.328	8 15 54.5	114.73
6	12 29 10.20	21.440	0 59 41.8	117.03	6	14 16 19.22	23.378	8 27 21.8	114.35
7	12 31 18.93	21.469	0 47 59.0	117.25	7	14 18 39.64	23.428	8 38 46.7	113.95
8	12 33 27.83	21.498	0 36 14.8	117.47	8	14 21 0.36	23.479	8 50 9.2	113.54
9	12 35 36.91	21.529	0 24 29.4	117.66	9	14 23 21.39	23.530	9 1 29.2	113.13
10	12 37 46.18	21.560	0 12 42.9	117.85	10	14 25 42.72	23.581	9 12 46.7	112.68
11	12 39 55.63	21.591	N. 0 0 55.2	118.04	11	14 28 4.36	23.632	9 24 1.4	112.23
12	12 42 5.27	21.623	S. 0 10 53.6	118.21	12	14 30 26.30	23.683	9 35 13.4	111.76
13	12 44 15.10	21.654	0 22 43.3	118.37	13	14 32 48.55	23.734	9 46 22.5	111.28
14	12 46 25.12	21.688	0 34 34.0	118.52	14	14 35 11.11	23.787	9 57 28.7	110.77
15	12 48 35.35	21.721	0 46 25.5	118.65	15	14 37 33.99	23.838	10 8 31.7	110.24
16	12 50 45.77	21.754	0 58 17.8	118.78	16	14 39 57.17	23.889	10 19 31.6	109.72
17	12 52 56.40	21.789	1 10 10.9	118.90	17	14 42 20.66	23.942	10 30 28.3	109.17
18	12 55 7.24	21.824	1 22 4.6	119.00	18	14 44 44.47	23.994	10 41 21.6	108.60
19	12 57 18.29	21.859	1 33 58.9	119.10	19	14 47 8.59	24.047	10 52 11.5	108.02
20	12 59 29.55	21.894	1 45 53.8	119.18	20	14 49 33.03	24.099	11 2 57.8	107.42
21	13 1 41.02	21.931	1 57 49.1	119.25	21	14 51 57.78	24.151	11 13 40.5	106.80
22	13 3 52.72	21.968	2 9 44.8	119.32	22	14 54 22.84	24.203	11 24 19.4	106.17
23	13 6 4.63	22.004	2 21 40.9	119.37	23	14 56 48.22	24.256	11 34 54.5	105.52
24	13 8 16.77	22.043	S. 2 33 37.2	119.39	24	14 59 13.91	24.308	S. 11 45 25.6	104.85

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
TUESDAY 25.					THURSDAY 27.				
	h m s	s	S. 10° 45' 25".6	104.85		h m s	s	S. 18° 21' 48".4	54.68
0	14 59 13.91	24.308	11 55 52.7	104.17	0	17 1 29.74	26.434	18 27 12.3	53.30
1	15 1 39.92	24.362	12 6 15.6	103.47	1	17 4 8.43	26.461	18 32 28.0	51.93
2	15 4 6.25	24.414	12 16 34.3	102.76	2	17 6 47.27	26.487	18 37 35.5	50.54
3	15 6 32.89	24.466	12 26 48.7	102.03	3	17 9 26.27	26.512	18 42 34.5	49.14
4	15 8 59.84	24.518	12 36 58.7	101.28	4	17 12 5.41	26.535	18 47 25.2	47.74
5	15 11 27.11	24.571	12 47 4.1	100.52	5	17 14 44.69	26.558	18 52 7.4	46.33
6	15 13 54.69	24.623	12 57 4.9	99.73	6	17 17 24.11	26.580	18 56 41.2	44.92
7	15 16 22.59	24.676	13 7 0.9	98.93	7	17 20 3.65	26.599	19 1 6.4	43.48
8	15 18 50.80	24.727	13 16 52.1	98.13	8	17 22 43.30	26.618	19 5 23.0	42.04
9	15 21 19.31	24.778	13 26 38.4	97.30	9	17 25 23.07	26.637	19 9 30.9	40.60
10	15 23 48.14	24.831	13 36 19.7	96.45	10	17 28 2.94	26.653	19 13 30.2	39.16
11	15 26 17.28	24.882	13 45 55.8	95.58	11	17 30 42.90	26.668	19 17 20.8	37.70
12	15 28 46.72	24.933	13 55 26.7	94.71	12	17 33 22.96	26.683	19 21 2.6	36.23
13	15 31 16.47	24.984	14 4 52.3	93.82	13	17 36 3.10	26.696	19 24 35.6	34.77
14	15 33 46.53	25.035	14 14 12.5	92.91	14	17 38 43.31	26.708	19 27 59.8	33.30
15	15 36 16.89	25.085	14 23 27.2	91.98	15	17 41 23.59	26.718	19 31 15.2	31.83
16	15 38 47.55	25.135	14 32 36.2	91.03	16	17 44 3.93	26.728	19 34 21.7	30.34
17	15 41 18.51	25.185	14 41 39.6	90.08	17	17 46 44.32	26.736	19 37 19.3	28.86
18	15 43 49.77	25.234	14 50 37.2	89.10	18	17 49 24.76	26.743	19 40 8.0	27.37
19	15 46 21.32	25.283	14 59 28.8	88.11	19	17 52 5.24	26.748	19 42 47.7	25.88
20	15 48 53.16	25.332	15 8 14.5	87.11	20	17 54 45.74	26.753	19 45 18.5	24.38
21	15 51 25.30	25.380	15 16 54.1	86.09	21	17 57 26.27	26.756	19 47 40.3	22.88
22	15 53 57.72	25.428	15 25 27.6	85.06	22	18 0 6.81	26.757	19 49 53.1	21.38
23	15 56 30.43	25.475			23	18 2 47.35	26.757		
WEDNESDAY 26.					FRIDAY 28.				
	h m s	s	S. 15 33 54.8	84.00		h m s	s	S. 19 51 56.9	19.88
0	15 59 3.42	25.521	15 42 15.6	82.93	0	18 5 27.89	26.756	19 53 51.7	18.38
1	16 1 36.68	25.568	15 50 30.0	81.86	1	18 8 8.42	26.754	19 55 37.5	16.88
2	16 4 10.23	25.614	15 58 37.9	80.76	2	18 10 48.94	26.751	19 57 14.2	15.37
3	16 6 44.05	25.658	16 6 39.1	79.65	3	18 13 29.43	26.746	19 58 41.9	13.86
4	16 9 18.13	25.703	16 14 33.7	78.53	4	18 16 9.89	26.740	20 0 5	12.35
5	16 11 52.49	25.748	16 22 21.4	77.38	5	18 18 50.31	26.733	20 1 10.1	10.85
6	16 14 27.10	25.790	16 30 2.3	76.23	6	18 21 30.68	26.723	20 2 10.7	9.35
7	16 17 1.97	25.833	16 37 36.2	75.07	7	18 24 10.99	26.713	20 3 2.3	7.84
8	16 19 37.09	25.875	16 45 3.1	73.88	8	18 26 51.24	26.703	20 3 44.8	6.33
9	16 22 12.47	25.916	16 52 22.8	72.68	9	18 29 31.42	26.689	20 4 18.3	4.83
10	16 24 48.08	25.956	16 59 35.3	71.48	10	18 32 11.51	26.675	20 4 42.8	3.34
11	16 27 23.94	25.997	17 6 40.6	70.27	11	18 34 51.52	26.661	20 4 58.4	1.84
12	16 30 0.04	26.036	17 13 38.5	69.03	12	18 37 31.44	26.644	20 5 4.9	0.34
13	16 32 36.37	26.073	17 20 28.9	67.78	13	18 40 11.25	26.626	20 5 2.5	1.14
14	16 35 12.92	26.111	17 27 11.8	66.53	14	18 42 50.95	26.607	20 4 51.2	2.63
15	16 37 49.70	26.148	17 33 47.2	65.26	15	18 45 30.53	26.587	20 4 30.9	4.12
16	16 40 26.69	26.183	17 40 14.9	63.97	16	18 48 9.99	26.566	20 4 1.8	5.60
17	16 43 3.89	26.218	17 46 34.8	62.68	17	18 50 49.32	26.543	20 3 23.7	7.08
18	16 45 41.30	26.251	17 52 47.0	61.38	18	18 53 28.51	26.519	20 2 36.9	8.54
19	16 48 18.90	26.284	17 58 51.3	60.05	19	18 56 7.55	26.494	20 1 41.2	10.02
20	16 50 56.71	26.317	18 4 47.6	58.72	20	18 58 46.44	26.468	20 0 36.7	11.48
21	16 53 34.70	26.347	18 10 35.9	57.38	21	19 1 25.17	26.440	19 59 23.5	12.93
22	16 56 12.87	26.377	18 16 16.2	56.04	22	19 4 3.72	26.412	19 58 1.6	14.38
23	16 58 51.22	26.406			23	19 6 42.11	26.383		
24	17 1 29.74	26.434	S. 18 21 48.4	54.68	24	19 9 20.31	26.351	S. 19 56 31.0	15.82

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
SATURDAY 29.					SUNDAY 30.				
	h m s	s	S. 19 56 31.0	15.82		h m s	s	S. 18 38 55.5	47.93
0	19 9 20.31	26.351	19 56 31.0	15.82	0	20 11 26.99	25.324	18 38 55.5	47.93
1	19 11 58.32	26.318	19 54 51.8	17.26	1	20 13 58.78	25.273	18 34 4.2	49.15
2	19 14 36.14	26.287	19 53 3.9	18.69	2	20 16 30.26	25.220	18 29 5.7	50.34
3	19 17 13.76	26.253	19 51 7.5	20.11	3	20 19 1.42	25.166	18 24 0.1	51.53
4	19 19 51.17	26.217	19 49 2.6	21.53	4	20 21 32.25	25.111	18 18 47.4	52.70
5	19 22 28.36	26.181	19 46 49.2	22.94	5	20 24 2.75	25.057	18 13 27.7	53.86
6	19 25 5.34	26.144	19 44 27.3	24.34	6	20 26 32.93	25.003	18 8 1.1	55.01
7	19 27 42.09	26.106	19 41 57.1	25.73	7	20 29 2.78	24.947	18 2 27.6	56.15
8	19 30 18.61	26.067	19 39 18.6	27.11	8	20 31 32.29	24.891	17 56 47.3	57.28
9	19 32 54.89	26.027	19 36 31.8	28.48	9	20 34 1.47	24.835	17 51 0.2	58.39
10	19 35 30.93	25.986	19 33 36.8	29.85	10	20 36 30.31	24.778	17 45 6.6	59.48
11	19 38 6.72	25.943	19 30 33.6	31.21	11	20 38 58.80	24.720	17 39 6.4	60.58
12	19 40 42.25	25.900	19 27 22.3	32.56	12	20 41 26.95	24.663	17 32 59.7	61.65
13	19 43 17.52	25.857	19 24 2.9	33.89	13	20 43 54.76	24.606	17 26 46.6	62.71
14	19 45 52.53	25.813	19 20 35.6	35.22	14	20 46 22.22	24.548	17 20 27.2	63.76
15	19 48 27.27	25.767	19 17 0.3	36.54	15	20 48 49.33	24.489	17 14 1.5	64.80
16	19 51 1.73	25.720	19 13 17.1	37.85	16	20 51 16.09	24.431	17 7 29.6	65.82
17	19 53 35.91	25.673	19 9 26.1	39.15	17	20 53 42.50	24.373	17 0 51.7	66.83
18	19 56 9.81	25.626	19 5 27.3	40.43	18	20 56 8.56	24.313	16 54 7.7	67.83
19	19 58 43.42	25.578	19 1 20.9	41.71	19	20 58 34.26	24.254	16 47 17.7	68.82
20	20 1 16.74	25.528	18 57 6.8	42.98	20	21 0 59.61	24.195	16 40 21.9	69.78
21	20 3 49.76	25.478	18 52 45.1	44.23	21	21 3 24.60	24.136	16 33 20.3	70.74
22	20 6 22.48	25.428	18 48 16.0	45.48	22	21 5 49.24	24.077	16 26 13.0	71.68
23	20 8 54.89	25.376	18 43 39.4	46.71	23	21 8 13.52	24.017	16 19 0.1	72.62
24	20 11 26.99	25.324	S. 18 38 55.5	47.93	24	21 10 37.44	23.957	S. 16 11 41.6	73.54

PHASES OF THE MOON.

		h m	
Nov. 3	☾ First Quarter	- - - - -	10 18.5
11	☉ Full Moon	- - - - -	0 30.7
19	☾ Last Quarter	- - - - -	5 38.5
26	● New Moon	- - - - -	5 15.5
		h	
Nov. 14	☾ Apogee	- - - - -	13.0
27	☾ Perigee	- - - - -	0.6

AT APPARENT NOON.

THE SUN'S					Sidereal Time of the Semi- diameter passing the Meridian.*	Equation of Time, to be subtracted from		Var. in 1 hour.
Date.		Apparent Right Ascension.	Var. in 1 hour.	Apparent Declination.		Var. in 1 hour.	added to Apparent Time.	
		h m s	s	° ' "	"	m s	m s	s
Mon.	1	16 29 19.41	10.799	S.21 48 42.3	23.34	1 10.22	10 54.19	0.940
Tues.	2	16 33 38.90	10.825	21 57 49.9	22.29	1 10.31	10 31.32	0.965
Wed.	3	16 37 58.99	10.849	22 6 32.1	21.23	1 10.39	10 7.85	0.990
Thur.	4	16 42 19.66	10.873	22 14 48.7	20.15	1 10.47	9 43.80	1.014
Frid.	5	16 46 40.89	10.896	22 22 39.3	19.06	1 10.55	9 19.20	1.036
Sat.	6	16 51 2.65	10.917	22 30 3.7	17.97	1 10.63	8 54.06	1.058
Sun.	7	16 55 24.93	10.938	22 37 1.7	16.86	1 10.70	8 28.41	1.079
Mon.	8	16 59 47.69	10.958	22 43 33.1	15.75	1 10.76	8 2.28	1.098
Tues.	9	17 4 10.91	10.977	22 49 37.6	14.63	1 10.82	7 35.69	1.117
Wed.	10	17 8 34.57	10.994	22 55 15.1	13.50	1 10.88	7 8.66	1.135
Thur.	11	17 12 58.64	11.011	23 0 25.5	12.36	1 10.93	6 41.22	1.151
Frid.	12	17 17 23.10	11.026	23 5 8.5	11.22	1 10.98	6 13.40	1.166
Sat.	13	17 21 47.91	11.040	23 9 24.0	10.07	1 11.03	5 45.23	1.181
Sun.	14	17 26 13.04	11.054	23 13 11.8	8.91	1 11.07	5 16.73	1.194
Mon.	15	17 30 38.48	11.066	23 16 31.8	7.75	1 11.11	4 47.92	1.206
Tues.	16	17 35 4.19	11.076	23 19 24.0	6.59	1 11.14	4 18.85	1.216
Wed.	17	17 39 30.14	11.085	23 21 48.2	5.42	1 11.17	3 49.54	1.225
Thur.	18	17 43 56.29	11.093	23 23 44.3	4.25	1 11.19	3 20.03	1.233
Frid.	19	17 48 22.62	11.100	23 25 12.3	3.08	1 11.21	2 50.34	1.240
Sat.	20	17 52 49.10	11.105	23 26 12.1	1.90	1 11.22	2 20.50	1.245
Sun.	21	17 57 15.68	11.109	23 26 43.6	0.73	1 11.23	1 50.56	1.249
Mon.	22	18 1 42.34	11.111	23 26 46.9	0.45	1 11.23	1 20.54	1.251
Tues.	23	18 6 9.03	11.112	23 26 21.9	1.63	1 11.23	0 50.49	1.252
Wed.	24	18 10 35.72	11.111	23 25 28.6	2.81	1 11.23	0 20.44	1.251
Thur.	25	18 15 2.37	11.109	23 24 7.0	3.99	1 11.22	0 9.58	1.249
Frid.	26	18 19 28.94	11.105	23 22 17.2	5.16	1 11.21	0 39.51	1.244
Sat.	27	18 23 55.39	11.098	23 19 59.2	6.34	1 11.19	1 9.31	1.239
Sun.	28	18 28 21.68	11.091	23 17 13.0	7.51	1 11.17	1 38.96	1.231
Mon.	29	18 32 47.76	11.082	23 13 58.8	8.68	1 11.14	2 8.41	1.222
Tues.	30	18 37 13.61	11.071	23 10 16.6	9.84	1 11.11	2 37.62	1.211
Wed.	31	18 41 39.19	11.059	23 6 6.5	11.00	1 11.07	3 6.56	1.200
Thur.	32	18 46 4.46	11.046	S.23 1 28.7	12.15	1 11.03	3 35.20	1.186

* Mean Time of the Semidiameter passing may be found by subtracting 0^s.19 from the Sidereal Time.

AT MEAN NOON.

Date.		THE SUN'S			Equation of Time, to be subtracted from	Sidereal Time.
		<i>Apparent</i> Right Ascension.	<i>Apparent</i> Declination.	Semi- diameter.*	<i>added to</i> <i>Apparent</i> <i>Time.</i>	
		<i>h m s</i>	<i>° ′ ″</i>	<i>′ ″</i>	<i>m s</i>	<i>h m s</i>
Mon.	1	16 29 21.37	S. 21 48 46.5	16 15.04	10 54.02	16 40 15.39
Tues.	2	16 33 40.80	21 57 53.8	16 15.19	10 31.15	16 44 11.95
Wed.	3	16 38 0.82	22 6 35.7	16 15.35	10 7.69	16 48 8.51
Thur.	4	16 42 21.42	22 14 51.9	16 15.50	9 43.64	16 52 5.06
Frid.	5	16 46 42.58	22 22 42.2	16 15.64	9 19.04	16 56 1.62
Sat.	6	16 51 4.27	22 30 6.3	16 15.78	8 53.91	16 59 58.18
Sun.	7	16 55 26.47	22 37 4.1	16 15.92	8 28.26	17 3 54.74
Mon.	8	16 59 49.16	22 43 35.2	16 16.04	8 2.13	17 7 51.29
Tues.	9	17 4 12.30	22 49 39.5	16 16.17	7 35.55	17 11 47.85
Wed.	10	17 8 35.88	22 55 16.8	16 16.29	7 8.53	17 15 44.41
Thur.	11	17 12 59.87	23 0 26.9	16 16.40	6 41.10	17 19 40.96
Frid.	12	17 17 24.24	23 5 9.6	16 16.51	6 13.28	17 23 37.52
Sat.	13	17 21 48.96	23 9 24.9	16 16.60	5 45.11	17 27 34.08
Sun.	14	17 26 14.02	23 13 12.6	16 16.70	5 16.62	17 31 30.64
Mon.	15	17 30 39.37	23 16 32.5	16 16.79	4 47.83	17 35 27.19
Tues.	16	17 35 4.98	23 19 24.5	16 16.87	4 18.77	17 39 23.75
Wed.	17	17 39 30.84	23 21 48.5	16 16.95	3 49.47	17 43 20.31
Thur.	18	17 43 56.91	23 23 44.5	16 17.02	3 19.96	17 47 16.87
Frid.	19	17 48 23.15	23 25 12.4	16 17.09	2 50.28	17 51 13.42
Sat.	20	17 52 49.53	23 26 12.1	16 17.15	2 20.45	17 55 9.98
Sun.	21	17 57 16.02	23 26 43.6	16 17.21	1 50.52	17 59 6.54
Mon.	22	18 1 42.59	23 26 46.9	16 17.26	1 20.51	18 3 3.10
Tues.	23	18 6 9.19	23 26 21.9	16 17.31	0 50.47	18 6 59.66
Wed.	24	18 10 35.78	23 25 28.6	16 17.35	0 20.43	18 10 56.21
Thur.	25	18 15 2.34	23 24 7.0	16 17.39	0 9.57	18 14 52.77
Frid.	26	18 19 28.82	23 22 17.2	16 17.43	0 39.49	18 18 49.33
Sat.	27	18 23 55.18	23 19 59.3	16 17.46	1 9.29	18 22 45.88
Sun.	28	18 28 21.37	23 17 13.2	16 17.49	1 38.93	18 26 42.44
Mon.	29	18 32 47.37	23 13 59.1	16 17.52	2 8.37	18 30 39.00
Tues.	30	18 37 13.13	23 10 17.0	16 17.54	2 37.57	18 34 35.56
Wed.	31	18 41 38.62	23 6 7.1	16 17.56	3 6.50	18 38 32.12
Thur.	32	18 46 3.80	S. 23 1 29.5	16 17.58	3 35.13	18 42 28.67

* The Semidiameter for *Apparent* Noon may be assumed the same as that for *Mean* Noon.

MEAN TIME.

Day.	THE SUN'S <i>Apparent</i>		Logarithm of the Radius Vector of the Earth.	Transit of the First Point of Aries.	THE MOON'S			
	Longitude.	Latitude.			Semidiameter.		Horizontal Parallax.	
	Noon.	Noon.			Noon.	Midnight.	Noon.	Midnight.
1	249° 2' 29.3	S. 0° 22	9.9937844	^{h m s} 7 18 32.57	16' 7.62	16' 0.62	59' 11.31	58' 45.63
2	250 3 21.3	0.36	.9937141	7 14 36.65	15 53.57	15 46.58	58 19.72	57 54.07
3	251 4 14.2	0.49	.9936456	7 10 40.74	15 39.77	15 33.22	57 29.08	57 5.06
4	252 5 7.9	0.60	9.9935790	7 6 44.83	15 27.01	15 21.18	56 42.27	56 20.88
5	253 6 2.3	0.69	.9935145	7 2 48.92	15 15.77	15 10.79	56 1.01	55 42.72
6	254 6 57.5	0.76	.9934523	6 58 53.01	15 6.24	15 2.13	55 26.03	55 10.95
7	255 7 53.5	0.81	9.9933924	6 54 57.10	14 58.45	14 55.17	54 57.42	54 45.41
8	256 8 50.3	0.82	.9933350	6 51 1.19	14 52.29	14 49.80	54 34.84	54 25.68
9	257 9 47.8	0.80	.9932800	6 47 5.28	14 47.66	14 45.88	54 17.84	54 11.30
10	258 10 46.1	0.76	9.9932277	6 43 9.36	14 44.44	14 43.34	54 6.02	54 1.97
11	259 11 45.3	0.69	.9931779	6 39 13.45	14 42.57	14 42.14	53 59.15	53 57.58
12	260 12 45.3	0.60	.9931308	6 35 17.54	14 42.06	14 42.35	53 57.29	53 58.35
13	261 13 46.1	0.50	9.9930863	6 31 21.63	14 43.02	14 44.10	54 0.81	54 4.76
14	262 14 47.7	0.38	.9930444	6 27 25.72	14 45.60	14 47.56	54 10.28	54 17.48
15	263 15 50.3	0.25	.9930051	6 23 29.81	14 50.01	14 52.96	54 26.46	54 37.30
16	264 16 53.7	S. 0.12	9.9929683	6 19 33.90	14 56.44	15 0.47	54 50.08	55 4.87
17	265 17 57.9	0.00	.9929340	6 15 37.98	15 5.06	15 10.21	55 21.70	55 40.59
18	266 19 3.0	N. 0.11	.9929021	6 11 42.07	15 15.90	15 22.12	56 1.49	56 24.32
19	267 20 9.0	0.22	9.9928725	6 7 46.16	15 28.82	15 35.95	56 48.92	57 15.07
20	268 21 15.8	0.30	.9928450	6 3 50.25	15 43.42	15 51.12	57 42.48	58 10.75
21	269 22 23.4	0.35	.9928197	5 59 54.34	15 58.93	16 6.70	58 39.43	59 7.94
22	270 23 31.7	0.38	9.9927963	5 55 58.43	16 14.26	16 21.40	59 35.66	60 1.88
23	271 24 40.7	0.37	.9927747	5 52 2.51	16 27.93	16 33.66	60 25.86	60 46.88
24	272 25 50.3	0.32	.9927547	5 48 6.60	16 38.39	16 41.94	61 4.22	61 17.27
25	273 27 0.3	0.25	9.9927364	5 44 10.69	16 44.20	16 45.05	61 25.54	61 28.69
26	274 28 10.8	0.15	.9927196	5 40 14.78	16 44.48	16 42.50	61 26.59	61 19.31
27	275 29 21.4	N. 0.03	.9927044	5 36 18.87	16 39.17	16 34.63	61 7.11	60 50.44
28	276 30 32.2	S. 0.11	9.9926908	5 32 22.96	16 29.03	16 22.56	60 29.89	60 6.13
29	277 31 43.0	0.24	.9926788	5 28 27.04	16 15.42	16 7.81	59 39.92	59 11.99
30	278 32 53.7	0.37	.9926686	5 24 31.13	15 59.93	15 51.97	58 43.09	58 13.87
31	279 34 4.2	0.48	.9926604	5 20 35.22	15 44.09	15 36.43	57 44.95	57 16.82
32	280 35 14.5	S. 0.58	9.9926543	5 16 39.31	15 29.10	15 22.19	56 49.91	56 24.58

MEAN TIME.

Day.	THE MOON'S						
	Longitude.		Latitude.		Age.	Meridian Passage.	
	Noon.	Midnight.	Noon.	Midnight.	Noon.	Upper.	Lower.
1	315° 13' 2.9	322° 11' 38.8	N. 0° 5' 11.0	S. 0° 31' 56.2	d 4.78	h m 4 40.7	h m 17 7.7
2	329 4 1.0	335 50 21.9	S. 1 8 3.4	1 42 41.6	5.78	5 33.8	17 59.0
3	342 30 59.9	349 6 16.8	2 15 25.7	2 45 54.2	6.78	6 23.4	18 47.1
4	355 36 36.8	2 2 25.4	3 13 49.3	3 38 56.0	7.78	7 10.3	19 33.1
5	8 24 8.1	14 42 9.5	4 1 2.0	4 19 57.6	8.78	7 55.5	20 17.7
6	20 56 52.8	27 8 39.6	4 35 35.4	4 47 50.0	9.78	8 39.8	21 1.9
7	33 17 49.5	39 24 39.9	4 56 37.9	5 1 57.5	10.78	9 24.0	21 46.2
8	45 29 26.4	51 32 22.3	5 3 49.0	5 2 14.4	11.78	10 8.6	22 31.3
9	57 33 40.0	63 33 30.2	4 57 17.4	4 49 3.4	12.78	10 54.2	23 17.3
10	69 32 2.7	75 29 27.6	4 37 39.6	4 23 14.5	13.78	11 40.7	* *
11	81 25 54.5	87 21 34.1	4 5 58.3	3 46 2.6	14.78	12 28.1	0 4.3
12	93 16 38.0	99 11 19.2	3 23 40.2	2 59 5.0	15.78	13 16.0	0 52.0
13	105 5 52.6	111 0 35.3	2 32 31.8	2 4 16.4	16.78	14 4.0	1 40.0
14	116 55 46.8	122 51 49.2	1 34 35.4	S. 1 3 45.7	17.78	14 51.6	2 27.8
15	128 49 7.0	134 48 7.2	S. 0 32 5.1	N. 0 0 8.2	18.78	15 38.5	3 15.1
16	140 49 19.9	146 53 16.5	N. 0 32 35.3	1 4 56.8	19.78	16 24.8	4 1.7
17	153 0 31.0	159 11 38.2	1 36 52.6	2 8 1.4	20.78	17 10.7	4 47.7
18	165 27 14.0	171 47 53.8	2 38 1.4	3 6 29.7	21.78	17 56.6	5 33.6
19	178 14 11.8	184 46 40.0	3 33 2.2	3 57 13.8	22.78	18 43.5	6 19.9
20	191 25 46.1	198 11 52.6	4 18 39.0	4 36 51.0	23.78	19 32.0	7 7.5
21	205 5 14.6	212 5 58.0	4 51 24.0	5 1 52.6	24.78	20 23.2	7 57.2
22	219 13 58.1	226 28 57.8	5 7 53.6	5 9 7.1	25.78	21 17.9	8 50.1
23	233 50 27.2	241 17 42.9	5 5 17.9	4 56 17.2	26.78	22 16.4	9 46.7
24	248 49 48.6	256 25 36.9	4 42 3.9	4 22 45.7	27.78	23 18.3	10 47.0
25	264 3 51.2	271 43 9.7	3 58 39.4	3 30 11.1	28.78	* *	11 50.0
26	279 22 8.3	286 59 24.6	2 57 55.4	2 22 33.3	0.34	0 22.0	12 53.9
27	294 33 41.8	302 3 51.5	1 44 50.9	N. 1 5 36.7	1.34	1 25.4	13 56.3
28	309 28 55.7	316 48 8.6	N. 0 25 39.3	S. 0 14 14.8	2.34	2 26.3	14 55.4
29	324 0 57.0	331 6 59.8	S. 0 53 22.1	1 31 4.5	3.34	3 23.4	15 50.4
30	338 6 7.5	344 58 20.6	2 6 48.9	2 40 7.8	4.34	4 16.5	16 41.7
31	351 43 48.1	358 22 46.3	3 10 39.0	3 38 5.5	5.34	5 6.1	17 29.8
32	4 55 37.0	11 22 45.6	S. 4 2 14.2	S. 4 22 56.1	6.34	5 53.0	18 15.7

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
MONDAY 1.					WEDNESDAY 3.				
	h m s	s				h m s	s		
0	21 10 37.44	23.957	S. 16 11 41.6	73.54	0	22 59 1.32	21.328	S. 8 57 1.7	102.93
1	21 13 1.00	23.897	16 4 17.6	74.45	1	23 1 9.15	21.283	8 46 43.1	103.27
2	21 15 24.20	23.838	15 56 48.2	75.33	2	23 3 16.72	21.239	8 36 22.5	103.58
3	21 17 47.05	23.778	15 49 13.6	76.22	3	23 5 24.02	21.194	8 26 0.1	103.89
4	21 20 9.54	23.718	15 41 33.6	77.09	4	23 7 31.05	21.151	8 15 35.8	104.20
5	21 22 31.67	23.658	15 33 48.5	77.93	5	23 9 37.83	21.108	8 5 9.7	104.48
6	21 24 53.44	23.599	15 25 58.4	78.78	6	23 11 44.35	21.066	7 54 42.0	104.77
7	21 27 14.86	23.540	15 18 3.2	79.61	7	23 13 50.62	21.024	7 44 12.5	105.04
8	21 29 35.92	23.480	15 10 3.1	80.43	8	23 15 56.64	20.983	7 33 41.5	105.29
9	21 31 56.62	23.420	15 1 58.1	81.23	9	23 18 2.41	20.942	7 23 9.0	105.55
10	21 34 16.96	23.361	14 53 48.4	82.01	10	23 20 7.94	20.902	7 12 34.9	105.79
11	21 36 36.95	23.303	14 45 34.0	82.79	11	23 22 13.23	20.863	7 1 59.5	106.02
12	21 38 56.59	23.243	14 37 14.9	83.55	12	23 24 18.29	20.823	6 51 22.7	106.25
13	21 41 15.87	23.184	14 28 51.4	84.29	13	23 26 23.11	20.784	6 40 44.5	106.46
14	21 43 34.80	23.126	14 20 23.4	85.03	14	23 28 27.70	20.747	6 30 5.2	106.66
15	21 45 53.38	23.068	14 11 51.0	85.77	15	23 30 32.07	20.710	6 19 24.6	106.86
16	21 48 11.61	23.009	14 3 14.2	86.48	16	23 32 36.22	20.673	6 8 42.9	107.04
17	21 50 29.49	22.951	13 54 33.3	87.17	17	23 34 40.14	20.636	5 58 0.1	107.23
18	21 52 47.02	22.893	13 45 48.2	87.86	18	23 36 43.85	20.601	5 47 16.2	107.39
19	21 55 4.20	22.835	13 36 59.0	88.53	19	23 38 47.35	20.566	5 36 31.4	107.54
20	21 57 21.04	22.778	13 28 5.8	89.19	20	23 40 50.64	20.531	5 25 45.7	107.69
21	21 59 37.54	22.722	13 19 8.7	89.84	21	23 42 53.72	20.497	5 14 59.1	107.84
22	22 1 53.70	22.665	13 10 7.7	90.48	22	23 44 56.60	20.464	5 4 11.6	107.98
23	22 4 9.52	22.608	S. 13 1 2.9	91.11	23	23 46 59.29	20.432	S. 4 53 23.4	108.09
TUESDAY 2.					THURSDAY 4.				
0	22 6 25.00	22.552	S. 12 51 54.4	91.72	0	23 49 1.78	20.398	S. 4 42 34.5	108.21
1	22 8 40.14	22.497	12 42 42.3	92.31	1	23 51 4.07	20.367	4 31 44.9	108.32
2	22 10 54.96	22.442	12 33 26.7	92.90	2	23 53 6.18	20.337	4 20 54.7	108.41
3	22 13 9.44	22.386	12 24 7.5	93.48	3	23 55 8.11	20.306	4 10 4.0	108.50
4	22 15 23.59	22.331	12 14 44.9	94.04	4	23 57 9.85	20.276	3 59 12.7	108.59
5	22 17 37.41	22.277	12 5 19.0	94.59	5	23 59 11.42	20.247	3 48 20.9	108.66
6	22 19 50.91	22.223	11 55 49.8	95.13	6	0 1 12.81	20.218	3 37 28.8	108.72
7	22 22 4.09	22.170	11 46 17.4	95.67	7	0 3 14.03	20.190	3 26 36.3	108.78
8	22 24 16.95	22.116	11 36 41.8	96.18	8	0 5 15.09	20.163	3 15 43.5	108.83
9	22 26 29.48	22.063	11 27 3.2	96.69	9	0 7 15.98	20.135	3 4 50.4	108.87
10	22 28 41.71	22.012	11 17 21.5	97.18	10	0 9 16.71	20.108	2 53 57.1	108.90
11	22 30 53.62	21.959	11 7 37.0	97.66	11	0 11 17.28	20.082	2 43 3.6	108.93
12	22 33 5.22	21.908	10 57 49.6	98.13	12	0 13 17.70	20.058	2 32 10.0	108.94
13	22 35 16.52	21.858	10 47 59.4	98.60	13	0 15 17.97	20.033	2 21 16.3	108.96
14	22 37 27.51	21.808	10 38 6.4	99.05	14	0 17 18.10	20.009	2 10 22.5	108.96
15	22 39 38.20	21.758	10 28 10.8	99.48	15	0 19 18.08	19.985	1 59 28.8	108.94
16	22 41 48.60	21.708	10 18 12.7	99.90	16	0 21 17.92	19.962	1 48 35.2	108.93
17	22 43 58.69	21.658	10 8 12.0	100.33	17	0 23 17.62	19.939	1 37 41.7	108.91
18	22 46 8.49	21.609	9 58 8.8	100.73	18	0 25 17.19	19.918	1 26 48.3	108.88
19	22 48 18.00	21.562	9 48 3.2	101.13	19	0 27 16.64	19.897	1 15 55.1	108.84
20	22 50 27.23	21.514	9 37 55.3	101.51	20	0 29 15.95	19.876	1 5 2.2	108.80
21	22 52 36.17	21.467	9 27 45.1	101.88	21	0 31 15.15	19.856	0 54 9.5	108.75
22	22 54 44.83	21.420	9 17 32.8	102.23	22	0 33 14.22	19.836	0 43 17.2	108.68
23	22 56 53.21	21.374	9 7 18.3	102.59	23	0 35 13.18	19.817	0 32 25.3	108.62
24	22 59 1.32	21.328	S. 8 57 1.7	102.93	24	0 37 12.02	19.798	S. 0 21 33.8	108.55

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
FRIDAY 5.					SUNDAY 7.				
	h m s	s	S.	108 ⁵⁵		h m s	s	N.	97 ⁰⁴
0	0 37 12.02	19.798	S. 0 21 33.8	108 ⁵⁵	0	2 11 5.14	19.503	N. 7 57 53.1	97 ⁰⁴
1	0 39 10.76	19.781	S. 0 10 42.7	108 ⁴⁸	1	2 13 2.17	19.508	8 7 34.1	96 ⁶⁴
2	0 41 9.39	19.763	N. 0 0 7.9	108 ³⁸	2	2 14 59.23	19.513	8 17 12.8	96 ²⁵
3	0 43 7.92	19.747	0 10 57.8	108 ²⁸	3	2 16 56.33	19.519	8 26 49.1	95 ⁸⁴
4	0 45 6.35	19.730	0 21 47.2	108 ¹⁸	4	2 18 53.46	19.524	8 36 22.9	95 ⁴³
5	0 47 4.68	19.713	0 32 36.0	108 ⁰⁸	5	2 20 50.62	19.530	8 45 54.2	95 ⁰⁰
6	0 49 2.91	19.698	0 43 24.1	107 ⁹⁵	6	2 22 47.82	19.537	8 55 22.9	94 ⁵⁸
7	0 51 1.06	19.684	0 54 11.4	107 ⁸³	7	2 24 45.06	19.543	9 4 49.1	94 ¹⁵
8	0 52 59.12	19.670	1 4 58.0	107 ⁷⁰	8	2 26 42.34	19.551	9 14 12.7	93 ⁷¹
9	0 54 57.10	19.657	1 15 43.8	107 ⁵⁶	9	2 28 39.67	19.558	9 23 33.6	93 ²⁷
10	0 56 55.00	19.643	1 26 28.7	107 ⁴²	10	2 30 37.04	19.566	9 32 51.9	92 ⁸²
11	0 58 52.82	19.631	1 37 12.8	107 ²⁷	11	2 32 34.46	19.574	9 42 7.4	92 ³⁶
12	1 0 50.57	19.619	1 47 55.9	107 ¹⁰	12	2 34 31.93	19.583	9 51 20.2	91 ⁹⁰
13	1 2 48.25	19.608	1 58 38.0	106 ⁹³	13	2 36 29.45	19.592	10 0 30.2	91 ⁴³
14	1 4 45.86	19.596	2 9 19.1	106 ⁷⁷	14	2 38 27.03	19.601	10 9 37.4	90 ⁹⁶
15	1 6 43.40	19.585	2 19 59.2	106 ⁵⁹	15	2 40 24.66	19.610	10 18 41.7	90 ⁴⁸
16	1 8 40.88	19.576	2 30 38.2	106 ⁴⁰	16	2 42 22.35	19.620	10 27 43.1	89 ⁹⁹
17	1 10 38.31	19.567	2 41 16.0	106 ²¹	17	2 44 20.10	19.629	10 36 41.6	89 ⁵⁰
18	1 12 35.68	19.558	2 51 52.7	106 ⁰¹	18	2 46 17.90	19.639	10 45 37.1	89 ⁰¹
19	1 14 33.00	19.548	3 2 28.1	105 ⁸⁰	19	2 48 15.77	19.651	10 54 29.7	88 ⁵¹
20	1 16 30.26	19.540	3 13 2.3	105 ⁵⁹	20	2 50 13.71	19.662	11 3 19.2	87 ⁹⁹
21	1 18 27.48	19.533	3 23 35.2	105 ³⁸	21	2 52 11.71	19.672	11 12 5.6	87 ⁴⁸
22	1 20 24.66	19.527	3 34 6.8	105 ¹⁵	22	2 54 9.77	19.683	11 20 48.9	86 ⁹⁶
23	1 22 21.80	19.520	N. 3 44 37.0	104 ⁹¹	23	2 56 7.90	19.695	N. 11 29 29.1	86 ⁴³
SATURDAY 6.					MONDAY 8.				
0	1 24 18.90	19.513	N. 3 55 5.7	104 ⁶⁸	0	2 58 6.11	19.707	N. 11 38 6.1	85 ⁹⁰
1	1 26 15.96	19.508	4 5 33.1	104 ⁴³	1	3 0 4.38	19.718	11 46 39.9	85 ³⁶
2	1 28 12.99	19.503	4 15 58.9	104 ¹⁸	2	3 2 2.73	19.731	11 55 10.4	84 ⁸²
3	1 30 10.00	19.498	4 26 23.2	103 ⁹³	3	3 4 1.15	19.743	12 3 37.7	84 ²⁷
4	1 32 6.97	19.494	4 36 46.0	103 ⁶⁶	4	3 5 59.65	19.757	12 12 1.6	83 ⁷¹
5	1 34 3.93	19.491	4 47 7.1	103 ³⁸	5	3 7 58.23	19.769	12 20 22.2	83 ¹⁶
6	1 36 0.86	19.487	4 57 26.6	103 ¹¹	6	3 9 56.88	19.782	12 28 39.5	82 ⁵⁹
7	1 37 57.77	19.484	5 7 44.4	102 ⁸³	7	3 11 55.61	19.795	12 36 53.3	82 ⁰²
8	1 39 54.67	19.483	5 18 0.5	102 ⁵³	8	3 13 54.42	19.808	12 45 3.7	81 ⁴⁴
9	1 41 51.56	19.481	5 28 14.8	102 ²⁴	9	3 15 53.31	19.823	12 53 10.6	80 ⁸⁵
10	1 43 48.44	19.479	5 38 27.4	101 ⁹⁴	10	3 17 52.29	19.837	13 1 13.9	80 ²⁶
11	1 45 45.31	19.478	5 48 38.1	101 ⁶³	11	3 19 51.35	19.851	13 9 13.7	79 ⁶⁸
12	1 47 42.18	19.478	5 58 46.9	101 ³¹	12	3 21 50.50	19.865	13 17 10.0	79 ⁰⁸
13	1 49 39.04	19.478	6 8 53.8	100 ⁹⁹	13	3 23 49.73	19.879	13 25 2.6	78 ⁴⁷
14	1 51 35.91	19.478	6 18 58.8	100 ⁶⁷	14	3 25 49.05	19.893	13 32 51.6	77 ⁸⁶
15	1 53 32.78	19.478	6 29 1.8	100 ³³	15	3 27 48.45	19.908	13 40 36.9	77 ²³
16	1 55 29.65	19.479	6 39 2.7	99 ⁹⁸	16	3 29 47.95	19.923	13 48 18.4	76 ⁶²
17	1 57 26.53	19.481	6 49 1.6	99 ⁶⁴	17	3 31 47.53	19.938	13 55 56.3	75 ⁹⁹
18	1 59 23.42	19.483	6 58 58.4	99 ²⁹	18	3 33 47.20	19.953	14 3 30.3	75 ³⁵
19	2 1 20.33	19.486	7 8 53.1	98 ⁹³	19	3 35 46.97	19.969	14 11 0.5	74 ⁷²
20	2 3 17.25	19.488	7 18 45.6	98 ⁵⁶	20	3 37 46.83	19.984	14 18 26.9	74 ⁰⁸
21	2 5 14.19	19.492	7 28 35.8	98 ¹⁹	21	3 39 46.78	19.999	14 25 49.4	73 ⁴³
22	2 7 11.15	19.495	7 38 23.9	97 ⁸²	22	3 41 46.82	20.014	14 33 8.0	72 ⁷⁷
23	2 9 8.13	19.499	7 48 9.6	97 ⁴³	23	3 43 46.95	20.030	14 40 22.6	72 ¹¹
24	2 11 5.14	19.503	N. 7 57 53.1	97 ⁰⁴	24	3 45 47.18	20.046	N. 14 47 33.3	71 ⁴⁵

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
TUESDAY 9.					THURSDAY 11.				
	h m s	s	N. 14 47 33.3	71.45		h m s	s	N. 19 4 43.5	34.06
0	3 45 47.18	20.046	14 47 33.3	71.45	0	5 23 48.75	20.766	19 4 43.5	34.06
1	3 47 47.50	20.062	14 54 40.0	70.78	1	5 25 53.38	20.777	19 8 5.2	33.18
2	3 49 47.92	20.078	15 1 42.6	70.10	2	5 27 58.07	20.788	19 11 21.7	32.32
3	3 51 48.44	20.094	15 8 41.2	69.43	3	5 30 2.84	20.800	19 14 33.0	31.43
4	3 53 49.05	20.109	15 15 35.7	68.74	4	5 32 7.67	20.810	19 17 38.9	30.55
5	3 55 49.75	20.125	15 22 26.1	68.04	5	5 34 12.56	20.821	19 20 39.6	29.67
6	3 57 50.55	20.142	15 29 12.2	67.34	6	5 36 17.52	20.832	19 23 34.9	28.77
7	3 59 51.45	20.158	15 35 54.2	66.65	7	5 38 22.54	20.842	19 26 24.8	27.88
8	4 1 52.45	20.174	15 42 32.0	65.94	8	5 40 27.62	20.851	19 29 9.5	27.00
9	4 3 53.54	20.190	15 49 5.5	65.23	9	5 42 32.75	20.860	19 31 48.8	26.10
10	4 5 54.73	20.206	15 55 34.8	64.52	10	5 44 37.94	20.870	19 34 22.7	25.20
11	4 7 56.01	20.223	16 1 59.7	63.79	11	5 46 43.19	20.880	19 36 51.2	24.31
12	4 9 57.40	20.239	16 8 20.3	63.07	12	5 48 48.50	20.888	19 39 14.4	23.41
13	4 11 58.88	20.254	16 14 36.5	62.33	13	5 50 53.85	20.896	19 41 32.1	22.50
14	4 14 0.45	20.271	16 20 48.3	61.60	14	5 52 59.25	20.905	19 43 44.4	21.59
15	4 16 2.13	20.288	16 26 55.7	60.86	15	5 55 4.71	20.913	19 45 51.2	20.68
16	4 18 3.90	20.303	16 32 58.6	60.12	16	5 57 10.21	20.920	19 47 52.6	19.78
17	4 20 5.77	20.319	16 38 57.1	59.37	17	5 59 15.75	20.928	19 49 48.6	18.88
18	4 22 7.73	20.335	16 44 51.0	58.61	18	6 1 21.34	20.935	19 51 39.1	17.96
19	4 24 9.79	20.351	16 50 40.4	57.85	19	6 3 26.97	20.942	19 53 24.1	17.04
20	4 26 11.94	20.368	16 56 25.2	57.09	20	6 5 32.64	20.948	19 55 3.6	16.13
21	4 28 14.20	20.383	17 2 5.5	56.33	21	6 7 38.34	20.953	19 56 37.6	15.21
22	4 30 16.54	20.398	17 7 41.1	55.54	22	6 9 44.08	20.960	19 58 6.1	14.28
23	4 32 18.98	20.415	N. 17 13 12.0	54.77	23	6 11 49.86	20.966	N. 19 59 29.0	13.37
WEDNESDAY 10.					FRIDAY 12.				
	h m s	s	N. 17 18 38.3	53.99		h m s	s	N. 20 0 46.5	12.45
0	4 34 21.52	20.431	17 18 38.3	53.99	0	6 13 55.67	20.971	20 0 46.5	12.45
1	4 36 24.15	20.446	17 23 59.9	53.21	1	6 16 1.51	20.976	20 1 58.4	11.53
2	4 38 26.87	20.462	17 29 16.8	52.42	2	6 18 7.38	20.980	20 3 4.8	10.61
3	4 40 29.69	20.477	17 34 28.9	51.62	3	6 20 13.27	20.984	20 4 5.7	9.68
4	4 42 32.59	20.492	17 39 36.2	50.83	4	6 22 19.19	20.988	20 5 1.0	8.75
5	4 44 35.59	20.508	17 44 38.8	50.03	5	6 24 25.13	20.993	20 5 50.7	7.82
6	4 46 38.68	20.523	17 49 36.5	49.21	6	6 26 31.10	20.996	20 6 34.8	6.89
7	4 48 41.86	20.538	17 54 29.3	48.40	7	6 28 37.08	20.998	20 7 13.4	5.98
8	4 50 45.13	20.552	17 59 17.3	47.59	8	6 30 43.08	21.002	20 7 46.5	5.04
9	4 52 48.48	20.567	18 4 0.4	46.77	9	6 32 49.10	21.004	20 8 13.9	4.11
10	4 54 51.93	20.582	18 8 38.5	45.94	10	6 34 55.13	21.005	20 8 35.8	3.18
11	4 56 55.46	20.595	18 13 11.7	45.13	11	6 37 1.17	21.008	20 8 52.1	2.26
12	4 58 59.07	20.609	18 17 40.0	44.29	12	6 39 7.22	21.009	20 9 2.9	1.33
13	5 1 2.77	20.624	18 22 3.2	43.46	13	6 41 13.28	21.010	20 9 8.0	0.39
14	5 3 6.56	20.638	18 26 21.5	42.63	14	6 43 19.34	21.011	20 9 7.6	0.53
15	5 5 10.43	20.651	18 30 34.7	41.78	15	6 45 25.41	21.012	20 9 1.6	1.47
16	5 7 14.37	20.664	18 34 42.8	40.93	16	6 47 31.48	21.012	20 8 50.0	2.40
17	5 9 18.40	20.678	18 38 45.9	40.09	17	6 49 37.55	21.012	20 8 32.8	3.33
18	5 11 22.51	20.691	18 42 43.9	39.23	18	6 51 43.62	21.012	20 8 10.0	4.26
19	5 13 26.69	20.704	18 46 36.7	38.38	19	6 53 49.69	21.011	20 7 41.7	5.18
20	5 15 30.96	20.717	18 50 24.4	37.53	20	6 55 55.75	21.010	20 7 7.8	6.13
21	5 17 35.29	20.728	18 54 7.0	36.66	21	6 58 1.81	21.008	20 6 28.2	7.06
22	5 19 39.70	20.742	18 57 44.3	35.79	22	7 0 7.85	21.007	20 5 43.1	7.98
23	5 21 44.19	20.754	19 1 16.5	34.93	23	7 2 13.89	21.005	20 4 52.5	8.90
24	5 23 48.75	20.766	N. 19 4 43.5	34.06	24	7 4 19.91	21.003	N. 20 3 56.3	9.84

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
SATURDAY 13.					MONDAY 15.				
	h m s	s	N. 20° 3' 56".3	9".84		h m s	s	N. 17° 32' 39".4	52".32
0	7 4 19.91	21.003	20 2 54.4	10.77	0	8 44 24.62	20.624	17 27 23.1	53.13
1	7 6 25.92	21.000	20 1 47.1	11.68	1	8 46 28.33	20.613	17 22 1.8	53.95
2	7 8 31.91	20.998	20 0 34.2	12.62	2	8 48 31.97	20.601	17 16 35.7	54.76
3	7 10 37.89	20.994	19 59 15.7	13.54	3	8 50 35.54	20.589	17 11 4.7	55.57
4	7 12 43.84	20.991	19 57 51.7	14.47	4	8 52 39.04	20.578	17 5 28.9	56.37
5	7 14 49.78	20.988	19 56 22.1	15.39	5	8 54 42.48	20.568	16 59 48.3	57.16
6	7 16 55.69	20.983	19 54 47.0	16.31	6	8 56 45.85	20.555	16 54 3.0	57.96
7	7 19 1.58	20.979	19 53 6.4	17.23	7	8 58 49.14	20.543	16 48 12.8	58.75
8	7 21 7.44	20.974	19 51 20.2	18.15	8	9 0 52.37	20.533	16 42 18.0	59.53
9	7 23 13.27	20.969	19 49 28.6	19.07	9	9 2 55.53	20.522	16 36 18.4	60.33
10	7 25 19.07	20.964	19 47 31.4	19.98	10	9 4 58.63	20.511	16 30 14.1	61.10
11	7 27 24.84	20.959	19 45 28.8	20.90	11	9 7 1.66	20.499	16 24 5.2	61.88
12	7 29 30.58	20.954	19 43 20.6	21.82	12	9 9 4.62	20.488	16 17 51.6	62.65
13	7 31 36.29	20.948	19 41 7.0	22.73	13	9 11 7.51	20.476	16 11 33.4	63.42
14	7 33 41.96	20.942	19 38 47.9	23.63	14	9 13 10.33	20.465	16 5 10.6	64.18
15	7 35 47.59	20.935	19 36 23.4	24.54	15	9 15 13.09	20.454	15 58 43.3	64.93
16	7 37 53.18	20.928	19 33 53.4	25.45	16	9 17 15.78	20.443	15 52 11.4	65.69
17	7 39 58.73	20.923	19 31 18.0	26.35	17	9 19 18.41	20.433	15 45 35.0	66.44
18	7 42 4.25	20.916	19 28 37.2	27.26	18	9 21 20.97	20.421	15 38 54.1	67.18
19	7 44 9.72	20.908	19 25 50.9	28.16	19	9 23 23.46	20.410	15 32 8.8	67.93
20	7 46 15.14	20.900	19 22 59.3	29.05	20	9 25 25.89	20.400	15 25 19.0	68.68
21	7 48 20.52	20.893	19 20 2.3	29.95	21	9 27 28.26	20.390	15 18 24.7	69.41
22	7 50 25.85	20.885	N. 19 16 59.9	30.85	22	9 29 30.57	20.379	N. 15 11 26.1	70.13
23	7 52 31.14	20.877			23	9 31 32.81	20.369		
SUNDAY 14.					TUESDAY 16.				
	h m s	s	N. 19 13 52.1	31.74		h m s	s	N. 15 4 23.2	70.85
0	7 54 36.37	20.868	19 10 39.0	32.63	0	9 33 35.00	20.359	14 57 15.9	71.58
1	7 56 41.55	20.859	19 7 20.6	33.52	1	9 35 37.12	20.348	14 50 4.3	72.29
2	7 58 46.68	20.851	19 3 56.8	34.41	2	9 37 39.18	20.338	14 42 48.4	73.01
3	8 0 51.76	20.843	19 0 27.7	35.28	3	9 39 41.18	20.329	14 35 28.2	73.71
4	8 2 56.79	20.833	18 56 53.4	36.16	4	9 41 43.13	20.320	14 28 3.9	74.41
5	8 5 1.76	20.823	18 53 13.8	37.03	5	9 43 45.02	20.310	14 20 35.3	75.12
6	8 7 6.67	20.814	18 49 29.0	37.91	6	9 45 46.85	20.301	14 13 2.5	75.81
7	8 9 11.53	20.805	18 45 38.9	38.79	7	9 47 48.63	20.293	14 5 25.6	76.49
8	8 11 16.33	20.795	18 41 43.5	39.66	8	9 49 50.36	20.283	13 57 44.6	77.18
9	8 13 21.07	20.785	18 37 43.0	40.52	9	9 51 52.03	20.274	13 49 59.5	77.85
10	8 15 25.75	20.775	18 33 37.3	41.38	10	9 53 53.65	20.266	13 42 10.4	78.53
11	8 17 30.37	20.765	18 29 26.4	42.24	11	9 55 55.22	20.258	13 34 17.2	79.20
12	8 19 34.93	20.755	18 25 10.4	43.10	12	9 57 56.75	20.250	13 26 20.0	79.87
13	8 21 39.43	20.744	18 16 22.9	44.80	13	9 59 58.22	20.242	13 18 18.8	80.53
14	8 23 43.86	20.733	18 11 51.6	45.65	14	10 1 59.65	20.235	13 10 13.6	81.18
15	8 25 48.23	20.723	18 7 15.1	46.50	15	10 4 1.04	20.228	13 2 4.6	81.83
16	8 27 52.54	20.713	18 2 33.6	47.34	16	10 6 2.39	20.221	12 53 51.6	82.48
17	8 29 56.78	20.702	17 57 47.0	48.18	17	10 8 3.69	20.213	12 45 34.8	83.12
18	8 32 0.96	20.691	17 52 55.5	49.01	18	10 10 4.95	20.207	12 37 14.2	83.75
19	8 34 5.07	20.679	17 47 58.9	49.84	19	10 12 6.17	20.201	12 28 49.8	84.38
20	8 36 9.11	20.668	17 42 57.4	50.67	20	10 14 7.36	20.195	12 20 21.6	85.02
21	8 38 13.09	20.658	17 37 50.9	51.50	21	10 16 8.51	20.189	12 11 49.6	85.64
22	8 40 17.00	20.646			22	10 18 9.63	20.184	12 3 13.9	86.25
23	8 42 20.84	20.635			23	10 20 10.72	20.178		
24	8 44 24.62	20.624	N. 17 32 39.4	52.32	24	10 22 11.77	20.173	N. 11 54 34.6	86.86

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
WEDNESDAY 17.					FRIDAY 19.				
	h m s	s	N. 11° 54' 34".6	86".86		h m s	s	N. 3° 57' 31".3	109".65
0	10 22 11.77	20.173			0	11 59 11.28	20.409		
1	10 24 12.80	20.170	11 45 51.6	87.48	1	12 1 13.78	20.426	3 46 32.4	109.97
2	10 26 13.81	20.165	11 37 4.9	88.08	2	12 3 16.39	20.443	3 35 31.7	110.28
3	10 28 14.78	20.161	11 28 14.7	88.67	3	12 5 19.10	20.460	3 24 29.1	110.58
4	10 30 15.74	20.158	11 19 20.9	89.26	4	12 7 21.91	20.478	3 13 24.7	110.88
5	10 32 16.68	20.154	11 10 23.6	89.84	5	12 9 24.84	20.498	3 2 18.5	111.18
6	10 34 17.59	20.151	11 1 22.8	90.43	6	12 11 27.89	20.518	2 51 10.6	111.46
7	10 36 18.49	20.149	10 52 18.5	91.00	7	12 13 31.05	20.538	2 40 1.0	111.73
8	10 38 19.38	20.148	10 43 10.8	91.57	8	12 15 34.34	20.558	2 28 49.8	112.00
9	10 40 20.26	20.145	10 33 59.7	92.13	9	12 17 37.75	20.579	2 17 37.0	112.27
10	10 42 21.12	20.143	10 24 45.2	92.69	10	12 19 41.29	20.601	2 6 22.6	112.53
11	10 44 21.98	20.143	10 15 27.4	93.25	11	12 21 44.96	20.623	1 55 6.7	112.77
12	10 46 22.83	20.142	10 6 6.2	93.80	12	12 23 48.76	20.646	1 43 49.4	113.00
13	10 48 23.68	20.142	9 56 41.8	94.34	13	12 25 52.71	20.670	1 32 30.7	113.23
14	10 50 24.53	20.142	9 47 14.1	94.88	14	12 27 56.80	20.693	1 21 10.6	113.45
15	10 52 25.38	20.142	9 37 43.3	95.41	15	12 30 1.03	20.718	1 9 49.3	113.67
16	10 54 26.23	20.143	9 28 9.2	95.94	16	12 32 5.41	20.743	0 58 26.6	113.88
17	10 56 27.09	20.143	9 18 32.0	96.46	17	12 34 9.95	20.769	0 47 2.8	114.07
18	10 58 27.95	20.145	9 8 51.7	96.98	18	12 36 14.64	20.796	0 35 37.8	114.26
19	11 0 28.83	20.148	8 59 8.3	97.48	19	12 38 19.50	20.823	0 24 11.7	114.43
20	11 2 29.72	20.150	8 49 21.9	97.99	20	12 40 24.52	20.850	0 12 44.6	114.61
21	11 4 30.63	20.153	8 39 32.4	98.49	21	12 42 29.70	20.878	N. 0 1 16.4	114.78
22	11 6 31.56	20.157	8 29 40.0	98.98	22	12 44 35.06	20.908	S. 0 10 12.7	114.93
23	11 8 32.51	20.160	N. 8 19 44.7	99.47	23	12 46 40.59	20.936	S. 0 21 42.7	115.08
THURSDAY 18.					SATURDAY 20.				
0	11 10 33.48	20.164	N. 8 9 46.4	99.95	0	12 48 46.29	20.966	S. 0 33 13.6	115.22
1	11 12 34.48	20.168	7 59 45.3	100.43	1	12 50 52.18	20.998	0 44 45.3	115.34
2	11 14 35.50	20.173	7 49 41.3	100.90	2	12 52 58.26	21.028	0 56 17.7	115.46
3	11 16 36.56	20.180	7 39 34.5	101.36	3	12 55 4.52	21.060	1 7 50.8	115.57
4	11 18 37.66	20.186	7 29 25.0	101.82	4	12 57 10.98	21.093	1 19 24.5	115.67
5	11 20 38.79	20.192	7 19 12.7	102.27	5	12 59 17.63	21.125	1 30 58.8	115.76
6	11 22 39.96	20.198	7 8 57.8	102.71	6	13 1 24.48	21.158	1 42 33.6	115.83
7	11 24 41.17	20.207	6 58 40.2	103.15	7	13 3 31.53	21.193	1 54 8.8	115.90
8	11 26 42.44	20.215	6 48 20.0	103.58	8	13 5 38.80	21.228	2 5 44.4	115.97
9	11 28 43.75	20.223	6 37 57.2	104.02	9	13 7 46.27	21.263	2 17 20.4	116.03
10	11 30 45.11	20.231	6 27 31.8	104.44	10	13 9 53.95	21.299	2 28 56.7	116.07
11	11 32 46.52	20.241	6 17 3.9	104.85	11	13 12 1.86	21.336	2 40 33.2	116.09
12	11 34 48.00	20.251	6 6 33.6	105.26	12	13 14 9.98	21.373	2 52 9.8	116.11
13	11 36 49.53	20.261	5 56 0.8	105.66	13	13 16 18.33	21.411	3 3 46.5	116.13
14	11 38 51.13	20.272	5 45 25.7	106.05	14	13 18 26.91	21.449	3 15 23.3	116.13
15	11 40 52.79	20.283	5 34 48.2	106.44	15	13 20 35.72	21.488	3 27 0.0	116.11
16	11 42 54.53	20.295	5 24 8.4	106.83	16	13 22 44.76	21.527	3 38 36.6	116.09
17	11 44 56.33	20.307	5 13 26.3	107.21	17	13 24 54.04	21.568	3 50 13.1	116.07
18	11 46 58.21	20.320	5 2 41.9	107.58	18	13 27 3.57	21.608	4 1 49.4	116.02
19	11 49 0.17	20.334	4 51 55.4	107.93	19	13 29 13.34	21.649	4 13 25.3	115.96
20	11 51 2.22	20.348	4 41 6.7	108.29	20	13 31 23.36	21.691	4 25 0.9	115.90
21	11 53 4.35	20.362	4 30 15.9	108.63	21	13 33 33.63	21.733	4 36 36.1	115.83
22	11 55 6.56	20.377	4 19 23.1	108.98	22	13 35 44.16	21.777	4 48 10.8	115.74
23	11 57 8.87	20.393	4 8 28.2	109.32	23	13 37 54.95	21.820	4 59 45.0	115.64
24	11 59 11.28	20.409	N. 3 57 31.3	109.65	24	13 40 6.00	21.864	S. 5 11 18.5	115.53

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
SUNDAY 21.					TUESDAY 23.				
	h m s	s	° ' "			h m s	s	° ' "	
0	13 40 6.00	21.864	S. 5 11 18.5	115.53	0	15 31 1.85	24.490	S. 13 48 19.3	94.38
1	13 42 17.32	21.909	5 22 51.3	115.40	1	15 33 28.97	24.550	13 57 43.2	93.57
2	13 44 28.91	21.954	5 34 23.3	115.27	2	15 35 56.45	24.610	14 7 2.1	92.73
3	13 46 40.77	21.999	5 45 54.5	115.13	3	15 38 24.29	24.670	14 16 16.0	91.90
4	13 48 52.90	22.046	5 57 24.8	114.97	4	15 40 52.49	24.730	14 25 24.9	91.04
5	13 51 5.32	22.093	6 8 54.1	114.80	5	15 43 21.05	24.790	14 34 28.5	90.17
6	13 53 18.02	22.140	6 20 22.4	114.62	6	15 45 49.97	24.850	14 43 26.9	89.28
7	13 55 31.00	22.188	6 31 49.5	114.42	7	15 48 19.25	24.909	14 52 19.8	88.37
8	13 57 44.27	22.237	6 43 15.4	114.22	8	15 50 48.88	24.968	15 1 7.3	87.44
9	13 59 57.84	22.286	6 54 40.1	113.99	9	15 53 18.87	25.028	15 9 49.1	86.50
10	14 2 11.70	22.335	7 6 3.3	113.76	10	15 55 49.21	25.087	15 18 25.3	85.56
11	14 4 25.86	22.385	7 17 25.2	113.52	11	15 58 19.91	25.145	15 26 55.8	84.58
12	14 6 40.32	22.436	7 28 45.5	113.25	12	16 0 50.95	25.203	15 35 20.3	83.59
13	14 8 55.09	22.487	7 40 4.2	112.98	13	16 3 22.34	25.261	15 43 38.9	82.59
14	14 11 10.16	22.538	7 51 21.3	112.70	14	16 5 54.08	25.318	15 51 51.4	81.58
15	14 13 25.54	22.589	8 2 36.6	112.40	15	16 8 26.16	25.375	15 59 57.8	80.54
16	14 15 41.23	22.642	8 13 50.1	112.09	16	16 10 58.58	25.432	16 7 57.9	79.49
17	14 17 57.24	22.695	8 25 1.7	111.77	17	16 13 31.34	25.488	16 15 51.7	78.43
18	14 20 13.57	22.748	8 36 11.3	111.43	18	16 16 4.44	25.544	16 23 39.1	77.35
19	14 22 30.22	22.803	8 47 18.8	111.07	19	16 18 37.87	25.599	16 31 19.9	76.26
20	14 24 47.20	22.857	8 58 24.1	110.70	20	16 21 11.63	25.654	16 38 54.2	75.15
21	14 27 4.50	22.911	9 9 27.2	110.33	21	16 23 45.72	25.708	16 46 21.7	74.02
22	14 29 22.13	22.965	9 20 28.0	109.93	22	16 26 20.13	25.762	16 53 42.4	72.88
23	14 31 40.08	23.020	S. 9 31 26.4	109.52	23	16 28 54.86	25.815	S. 17 0 56.2	71.72
MONDAY 22.					WEDNESDAY 24.				
	h m s	s	° ' "			h m s	s	° ' "	
0	14 33 58.37	23.077	S. 9 42 22.2	109.09	0	16 31 29.91	25.868	S. 17 8 3.0	70.55
1	14 36 17.00	23.133	9 53 15.5	108.66	1	16 34 5.27	25.919	17 15 2.8	69.37
2	14 38 35.97	23.189	10 4 6.1	108.20	2	16 36 40.94	25.971	17 21 55.4	68.17
3	14 40 55.27	23.245	10 14 53.9	107.73	3	16 39 16.92	26.021	17 28 40.8	66.96
4	14 43 14.91	23.303	10 25 38.9	107.26	4	16 41 53.19	26.070	17 35 18.9	65.73
5	14 45 34.90	23.360	10 36 21.0	106.76	5	16 44 29.76	26.119	17 41 49.6	64.49
6	14 47 55.23	23.418	10 47 0.0	106.24	6	16 47 6.62	26.168	17 48 12.8	63.23
7	14 50 15.91	23.476	10 57 35.9	105.72	7	16 49 43.77	26.215	17 54 28.4	61.97
8	14 52 36.94	23.534	11 8 8.6	105.18	8	16 52 21.20	26.261	18 0 36.4	60.69
9	14 54 58.32	23.593	11 18 38.0	104.62	9	16 54 58.90	26.306	18 6 36.7	59.39
10	14 57 20.05	23.652	11 29 4.0	104.04	10	16 57 36.87	26.351	18 12 29.1	58.08
11	14 59 42.14	23.711	11 39 26.5	103.45	11	17 0 15.11	26.394	18 18 13.7	56.77
12	15 2 4.58	23.770	11 49 45.4	102.84	12	17 2 53.60	26.437	18 23 50.3	55.43
13	15 4 27.38	23.829	12 0 0.6	102.23	13	17 5 32.35	26.479	18 29 18.9	54.09
14	15 6 50.53	23.888	12 10 12.1	101.60	14	17 8 11.35	26.520	18 34 39.4	52.73
15	15 9 14.04	23.948	12 20 19.8	100.95	15	17 10 50.59	26.560	18 39 51.7	51.37
16	15 11 37.91	24.008	12 30 23.5	100.28	16	17 13 30.07	26.598	18 44 55.8	49.99
17	15 14 2.14	24.068	12 40 23.1	99.59	17	17 16 9.77	26.636	18 49 51.6	48.61
18	15 16 26.73	24.128	12 50 18.6	98.90	18	17 18 49.70	26.673	18 54 39.1	47.21
19	15 18 51.68	24.188	13 0 9.9	98.19	19	17 21 29.84	26.708	18 59 18.1	45.79
20	15 21 16.99	24.248	13 9 56.9	97.46	20	17 24 10.19	26.742	19 3 48.6	44.38
21	15 23 42.66	24.308	13 19 39.4	96.71	21	17 26 50.74	26.775	19 8 10.6	42.94
22	15 26 8.69	24.369	13 29 17.4	95.94	22	17 29 31.49	26.807	19 12 23.9	41.50
23	15 28 35.09	24.430	13 38 50.7	95.16	23	17 32 12.42	26.837	19 16 28.6	40.05
24	15 31 1.85	24.490	S. 13 48 19.3	94.38	24	17 34 53.53	26.867	S. 19 20 24.5	38.59

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
THURSDAY 25.					SATURDAY 27.				
	h m s	s	S. 19° 20' 24" 5	38" 59		h m s	s	S. 19° 29' 48" 1	34" 43
0	17 34 53.53	26.867	19 20 24.5	38.59	0	19 44 36.43	26.635	19 29 48.1	34.43
1	17 37 34.82	26.895	19 24 11.7	37.13	1	19 47 16.12	26.597	19 26 17.2	35.87
2	17 40 16.27	26.922	19 27 50.1	35.66	2	19 49 55.59	26.558	19 22 37.7	37.29
3	17 42 57.88	26.948	19 31 19.6	34.18	3	19 52 34.81	26.517	19 18 49.7	38.70
4	17 45 39.64	26.972	19 34 40.2	32.68	4	19 55 13.79	26.476	19 14 53.3	40.10
5	17 48 21.54	26.995	19 37 51.8	31.18	5	19 57 52.52	26.433	19 10 48.5	41.48
6	17 51 3.58	27.017	19 40 54.4	29.68	6	20 0 30.99	26.389	19 6 35.5	42.86
7	17 53 45.74	27.037	19 43 48.0	28.18	7	20 3 9.19	26.345	19 2 14.2	44.23
8	17 56 28.02	27.056	19 46 32.5	26.66	8	20 5 47.13	26.299	18 57 44.7	45.59
9	17 59 10.41	27.073	19 49 7.9	25.13	9	20 8 24.78	26.252	18 53 7.1	46.93
10	18 1 52.89	27.088	19 51 34.1	23.61	10	20 11 2.15	26.205	18 48 21.5	48.26
11	18 4 35.47	27.103	19 53 51.2	22.01	11	20 13 39.24	26.157	18 43 28.0	49.58
12	18 7 18.13	27.117	19 55 59.0	20.53	12	20 16 16.03	26.107	18 38 26.6	50.89
13	18 10 0.87	27.129	19 57 57.6	19.00	13	20 18 52.52	26.056	18 33 17.3	52.18
14	18 12 43.68	27.139	19 59 47.0	17.46	14	20 21 28.70	26.005	18 28 0.4	53.47
15	18 15 26.54	27.148	20 1 27.1	15.91	15	20 24 4.58	25.953	18 22 35.7	54.74
16	18 18 9.45	27.156	20 2 57.9	14.35	16	20 26 40.14	25.900	18 17 3.5	55.99
17	18 20 52.41	27.163	20 4 19.3	12.80	17	20 29 15.38	25.847	18 11 23.8	57.24
18	18 23 35.40	27.167	20 5 31.5	11.25	18	20 31 50.30	25.793	18 5 36.6	58.48
19	18 26 18.41	27.169	20 6 34.3	9.69	19	20 34 24.90	25.738	17 59 42.1	59.68
20	18 29 1.43	27.171	20 7 27.8	8.13	20	20 36 59.16	25.682	17 53 40.4	60.89
21	18 31 44.46	27.171	20 8 11.9	6.57	21	20 39 33.08	25.626	17 47 31.4	62.08
22	18 34 27.48	27.169	20 8 46.6	5.01	22	20 42 6.67	25.569	17 41 15.4	63.25
23	18 37 10.49	27.167	S. 20 9 12.0	3.46	23	20 44 39.91	25.512	S. 17 34 52.4	64.42
FRIDAY 26.					SUNDAY 28.				
	h m s	s	S. 20 9 28.1	1.90		h m s	s	S. 17 28 22.4	65.57
0	18 39 53.48	27.163	20 9 28.1	1.90	0	20 47 12.81	25.454	17 28 22.4	65.57
1	18 42 36.44	27.158	20 9 34.8	0.33	1	20 49 45.36	25.395	17 21 45.6	66.69
2	18 45 19.37	27.150	20 9 32.1	1.23	2	20 52 17.55	25.336	17 15 2.1	67.81
3	18 48 2.24	27.141	20 9 20.1	2.78	3	20 54 49.39	25.277	17 8 11.9	68.92
4	18 50 45.06	27.131	20 8 58.8	4.33	4	20 57 20.87	25.216	17 1 15.1	70.01
5	18 53 27.81	27.119	20 8 28.1	5.89	5	20 59 51.98	25.155	16 54 11.8	71.09
6	18 56 10.49	27.106	20 7 48.1	7.44	6	21 2 22.73	25.095	16 47 2.0	72.15
7	18 58 53.08	27.092	20 6 58.8	8.98	7	21 4 53.12	25.033	16 39 46.0	73.18
8	19 1 35.59	27.076	20 6 0.3	10.52	8	21 7 23.13	24.972	16 32 23.8	74.22
9	19 4 17.99	27.058	20 4 52.6	12.06	9	21 9 52.78	24.911	16 24 55.4	75.24
10	19 7 0.29	27.040	20 3 35.6	13.60	10	21 12 22.06	24.848	16 17 20.9	76.24
11	19 9 42.47	27.019	20 2 9.4	15.13	11	21 14 50.96	24.786	16 9 40.5	77.22
12	19 12 24.52	26.997	20 0 34.1	16.65	12	21 17 19.49	24.723	16 1 54.3	78.19
13	19 15 6.44	26.974	19 58 49.6	18.18	13	21 19 47.64	24.660	15 54 2.2	79.15
14	19 17 48.21	26.950	19 56 56.0	19.69	14	21 22 15.41	24.597	15 46 4.5	80.08
15	19 20 29.84	26.925	19 54 53.3	21.20	15	21 24 42.80	24.533	15 38 1.2	81.02
16	19 23 11.31	26.898	19 52 41.6	22.70	16	21 27 9.81	24.470	15 29 52.3	81.93
17	19 25 52.61	26.869	19 50 20.9	24.19	17	21 29 36.44	24.407	15 21 38.1	82.82
18	19 28 33.74	26.839	19 47 51.3	25.68	18	21 32 2.69	24.343	15 13 18.5	83.70
19	19 31 14.68	26.808	19 45 12.7	27.17	19	21 34 28.55	24.279	15 4 53.7	84.57
20	19 33 55.44	26.777	19 42 25.3	28.63	20	21 36 54.04	24.216	14 56 23.7	85.42
21	19 36 36.00	26.743	19 39 29.1	30.10	21	21 39 19.14	24.151	14 47 48.7	86.25
22	19 39 16.36	26.708	19 36 24.1	31.56	22	21 41 43.85	24.088	14 39 8.7	87.07
23	19 41 56.50	26.673	19 33 10.4	33.00	23	21 44 8.19	24.024	14 30 23.9	87.87
24	19 44 36.43	26.635	S. 19 29 48.1	34.43	24	21 46 32.14	23.960	S. 14 21 34.3	88.66

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
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MONDAY 29.

	h	m	s	s		h	m	s	s
0	21	46	32	14	23	960	S.	14	21
1	21	48	55	71	23	897		14	12
2	21	51	18	90	23	833		14	3
3	21	53	41	70	23	769		13	54
4	21	56	4	13	23	706		13	45
5	21	58	26	17	23	642		13	36
6	22	0	47	83	23	579		13	27
7	22	3	9	12	23	517		13	17
8	22	5	30	03	23	453		13	8
9	22	7	50	56	23	390		12	58
10	22	10	10	71	23	328		12	49
11	22	12	30	50	23	267		12	39
12	22	14	49	91	23	203		12	29
13	22	17	8	94	23	142		12	20
14	22	19	27	61	23	081		12	10
15	22	21	45	91	23	020		12	0
16	22	24	3	85	22	960		11	50
17	22	26	21	43	22	899		11	40
18	22	28	38	64	22	838		11	30
19	22	30	55	49	22	778		11	20
20	22	33	11	98	22	719		11	10
21	22	35	28	12	22	660		11	0
22	22	37	43	90	22	602		10	50
23	22	39	59	34	22	544	S.	10	39

TUESDAY 30.

0	22	42	14	43	22	486	S.	10	29
1	22	44	29	17	22	428		10	19
2	22	46	43	57	22	372		10	8
3	22	48	57	63	22	315		9	58
4	22	51	11	35	22	259		9	48
5	22	53	24	74	22	203		9	37
6	22	55	37	79	22	148		9	26
7	22	57	50	52	22	94		9	16
8	23	0	2	92	22	040		9	5
9	23	2	15	00	21	986		8	55
10	23	4	26	75	21	933		8	44
11	23	6	38	19	21	881		8	33
12	23	8	49	32	21	828		8	22
13	23	11	0	13	21	777		8	12
14	23	13	10	64	21	726		8	1
15	23	15	20	84	21	675		7	50
16	23	17	30	74	21	626		7	39
17	23	19	40	35	21	577		7	28
18	23	21	49	66	21	527		7	17
19	23	23	58	67	21	478		7	6
20	23	26	7	40	21	432		6	55
21	23	28	15	85	21	385		6	45
22	23	30	24	02	21	338		6	34
23	23	32	31	90	21	292		6	23
24	23	34	39	52	21	247	S.	6	11

WEDNESDAY 31.

	h	m	s	s		h	m	s	s
0	23	34	39	52	21	247	S.	6	11
1	23	36	46	86	21	202		6	0
2	23	38	53	94	21	158		5	49
3	23	41	0	75	21	114		5	38
4	23	43	7	31	21	072		5	27
5	23	45	13	61	21	028		5	16
6	23	47	19	65	20	987		5	5
7	23	49	25	45	20	946		4	54
8	23	51	31	00	20	905		4	43
9	23	53	36	31	20	865		4	32
10	23	55	41	38	20	826		4	21
11	23	57	46	22	20	788		4	9
12	23	59	50	83	20	749		3	58
13	0	1	55	21	20	712		3	47
14	0	3	59	37	20	675		3	36
15	0	6	3	31	20	638		3	25
16	0	8	7	03	20	603		3	14
17	0	10	10	55	20	568		3	2
18	0	12	13	85	20	533		2	51
19	0	14	16	95	20	500		2	40
20	0	16	19	85	20	467		2	29
21	0	18	22	55	20	434		2	18
22	0	20	25	06	20	403		2	7
23	0	22	27	38	20	371	S.	1	56

THURSDAY, JAN. 1, 1925.

0	0	24	29	51	20	340	S.	1	44
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PHASES OF THE MOON.

Dec.		h	m
2) First Quarter	21	10
10	○ Full Moon	19	3
18	(Last Quarter	22	11
25	● New Moon	15	45

Dec.		h
11	(Apogee	20
25	(Perigee	13

MEAN TIME.

Date.	Apparent Right Ascension.			Sid. Time of Semid. pass Merid.	Apparent Declination.			Semidiameter.	Hor. Par.	Log. of True Dist. from the Earth.			Meridian Passage.	Heliocentric Longitude.			Heliocentric Latitude.			Log. of Rad. Vect.
	Noon.				Noon.					Noon.				Noon.			Noon.			
	h	m	s	s	°	'	"	"					h	m	°	'	"	°	'	"
Jan.	1	20	2	4.90	0	27	S. 20 51	0.5	3	83	10.11	9.9398932	1 22 4	39 29 51.8	S. 0 58	16.6	9.5028917			
	2	20	3	25.67	0	28	20 30 55.5	3.95	10.41		.9269143	1 19.8	45 26 16.8	S. 0 14	41.0	.4984566				
	3	20	4	2.81	0	29	20 11 52.7	4.07	10.73		.9138585	1 16.4	51 29 26.8	N. 0 29	54.1	.4947069				
	4	20	3	53.57	0	30	19 54 10.2	4.19	11.06		.9008870	1 12.3	57 38 23.2	1 14	50.4	.4917171				
	5	20	2	55.89	0	31	19 38 5.0	4.32	11.38		.8881935	1 7.4	63 51 57.1	1 59	26.2	.4895494				
	6	20	1	8.85	0	32	19 23 51.7	4.44	11.71		.8759998	1 1.6	70 8 51.0	2 42	57.8	.4882508				
	7	19	58	32.92	0	32	S. 19 11 42.3	4.56	12.02		9.8645499	0 55.1	76 27 40.3	N. 3 24	41.5	9.4878501				
	8	19	55	10.31	0	33	19 1 44.6	4.67	12.31		.8541013	0 47.8	82 46 56.0	4 3	55.9	.4883565				
	9	19	51	5.16	0	34	18 54 2.0	4.77	12.58		.8449081	0 39.8	89 5 6.9	4 40	3.5	.4897587				
	10	19	46	23.58	0	34	18 48 33.4	4.86	12.80		.8372044	0 31.2	95 20 43.3	5 12	32.9	.4920253				
	11	19	41	13.54	0	35	18 45 13.7	4.93	12.98		.8311858	0 22.2	101 32 19.4	5 40	59.8	.4951076				
	12	19	35	44.42	0	35	18 43 54.6	4.98	13.11		.8269915	0 12.8	107 38 36.1	6 5	7.7	.4989416				
	13	19	30	6.52	0	35	S. 18 44 25.7	5.00	13.18		9.8246934	{ 0 33.1 23 53.8 }	113 38 23.2	N. 6 24	48.2	9.5034518				
	14	19	24	30.31	0	35	18 46 35.0	5.00	13.19		.8242894	23 44.5	119 30 41.1	6 40	0.2	.5085553				
	15	19	19	5.74	0	35	18 50 10.8	4.99	13.15		.8257074	23 35.5	125 14 41.6	6 50	49.3	.5141649				
	16	19	14	1.63	0	35	18 55 1.7	4.95	13.05		.8288144	23 27.0	130 49 47.9	6 57	26.5	.5201930				
	17	19	9	25.28	0	35	19 0 56.9	4.90	12.91		.8334331	23 19.1	136 15 34.6	7 0	6.8	.5265535				
	18	19	5	22.19	0	34	19 7 46.4	4.84	12.74		.8393576	23 11.7	141 31 46.7	6 59	8.1	.5331652				
	19	19	1	56.11	0	34	S. 19 15 20.7	4.76	12.53		9.8463702	23 5.0	146 38 18.5	N. 6 54	50.3	9.5399522				
	20	18	59	9.15	0	33	19 23 30.8	4.67	12.31		.8542564	22 58.9	151 35 12.2	6 47	33.7	.5468454				
	21	18	57	2.03	0	32	19 32 7.9	4.58	12.07		.8628140	22 53.5	156 22 37.0	6 37	38.6	.5537833				
	22	18	55	34.36	0	32	19 41 3.7	4.49	11.82		.8718603	22 48.8	161 0 47.0	6 25	24.9	.5607110				
	23	18	54	44.91	0	31	19 50 9.8	4.39	11.57		.8812364	22 44.6	165 30 0.8	6 11	11.1	.5675813				
	24	18	54	31.90	0	31	19 59 18.0	4.30	11.32		.8908063	22 41.0	169 50 39.9	5 55	14.5	.5743535				
25	18	54	53.18	0	30	S. 20 8 21.0	4.20	11.07		9.9004575	22 37.9	174 3 8.0	N. 5 37	51.0	9.5809932					
26	18	55	46.42	0	30	20 17 11.3	4.11	10.82		.9100987	22 35.3	178 7 50.1	5 19	14.8	.5874710					
27	18	57	9.19	0	29	20 25 42.2	4.02	10.59		.9196568	22 33.2	182 5 11.9	4 59	38.7	.5937631					
28	18	58	59.15	0	28	20 33 47.4	3.93	10.36		.9290753	22 31.5	185 55 39.3	4 39	14.7	.5998486					
29	19	1	13.98	0	27	20 41 20.9	3.85	10.14		.9383112	22 30.1	189 39 38.0	4 18	10.6	.6057144					
30	19	3	51.52	0	27	20 48 17.3	3.77	9.93		.9473323	22 29.1	193 17 33.4	3 56	37.4	.6113449					
Feb.	31	19	6	49.73	0	26	S. 20 54 32.3	3.70	9.74		9.9561158	22 28.4	196 49 50.1	N. 3 34	41.8	9.6167310				
	1	19	10	6.76	0	26	21 0 1.0	3.63	9.55		.9646464	22 28.0	200 16 52.0	3 12	30.5	.6218649				
	2	19	13	40.86	0	25	21 4 39.6	3.56	9.37		.9729141	22 27.9	203 39 1.9	2 50	9.1	.6267407				
	3	19	17	30.49	0	25	21 8 24.7	3.49	9.20		.9809139	22 28.0	206 56 42.0	2 27	42.6	.6313544				
	4	19	21	34.20	0	24	21 11 13.1	3.43	9.03		.9886445	22 28.3	210 10 13.4	2 5	15.2	.6357025				
	5	19	25	50.72	0	24	21 13 2.0	3.37	8.88		9.9961072	22 28.8	213 19 56.1	1 42	50.6	.6397834				
	6	19	30	18.86	0	24	S. 21 13 49.2	3.32	8.73		0.0033048	22 29.5	216 26 9.4	N. 1 20	32.0	9.6435960				
	7	19	34	57.58	0	24	21 13 32.0	3.26	8.59		.0102428	22 30.4	219 29 11.7	0 58	22.0	.6471399				
	8	19	39	45.90	0	23	21 12 8.7	3.21	8.46		.0169267	22 31.4	222 29 20.5	0 36	23.0	.6504148				
	9	19	44	42.99	0	23	21 9 37.8	3.16	8.34		.0233634	22 32.5	225 26 52.7	N. 0 14	37.1	.6534215				
	10	19	49	48.05	0	22	21 5 57.7	3.12	8.22		.0295599	22 33.8	228 22 4.3	S. 0 6	54.0	.6561606				
	11	19	55	0.40	0	22	21 1 7.0	3.08	8.11		.0355233	22 35.2	231 15 10.7	0 28	8.6	.6586331				
	12	20	0	19.39	0	22	S. 20 55 4.6	3.04	8.00		0.0412615	22 36.6	234 6 26.9	S. 0 49	5.4	9.6608398				
	13	20	5	44.45	0	22	20 47 49.4	3.00	7.90		.0467815	22 38.2	236 56 7.0	1 9	43.0	.6627816				
	14	20	11	15.07	0	21	20 39 20.6	2.97	7.81		.0520911	22 39.9	239 44 25.2	1 30	0.3	.6644595				
	15	20	16	50.77	0	21	20 29 37.5	2.93	7.72		.0571968	22 41.6	242 31 34.8	1 49	56.1	.6658747				
16	20	22	31.14	0	21	S. 20 18 39.3	2.90	7.63		0.0621059	22 43.4	245 17 48.9	S. 2 9	29.5	9.6670280					

MERCURY, 1924.

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MEAN TIME.

Date.	Apparent Right Ascension.			Sid. Time of Semid. pass Merid.	Apparent Declination.			Semidiameter.	Hor. Par.	Log. of True Dist. from the Earth.			Meridian Passage.	Heliocentric Longitude.			Heliocentric Latitude.			Log. of Rad. Vect.				
	Noon.				Noon.					Noon.				Noon.			Noon.			Noon.				
	h	m	s	s	°	'	"	"	"	°	'	"	h	m	s	°	'	"	°	'	"			
Feb. 16	20	22	31.14	0.21	S. 20	18	39.3	2.90	7.63	0.0621059	22	43.4	24	5	17	48.9	S. 2	9	29.5	9.6670280				
17	20	28	15.80	0.20		20	6	25.5	2.87	7.55	0.0668247	22	45.2	24	8	32.0		2	28	39.3	9.6679199			
18	20	34	4.41	0.20		19	52	55.6	2.84	7.47	0.0713591	22	47.1	25	0	48	21.7		2	47	24.6	9.6685511		
19	20	39	56.65	0.20		19	38	9.2	2.81	7.39	0.0757154	22	49.1	25	3	33	5.5		3	5	44.2	9.6689220		
20	20	45	52.27	0.20		19	22	5.7	2.78	7.32	0.0798984	22	51.2	25	6	17	43.9		3	23	37.1	9.6690328		
21	20	51	50.99	0.19		19	4	45.1	2.75	7.25	0.0839136	22	53.3	25	9	2	29.2		3	41	2.1	9.6688837		
22	20	57	52.61	0.19	S. 18	46	6.9	2.73	7.19	0.0877652	22	55.4	26	1	47	33.6	S. 3	57	58.1	9.6684745				
23	21	3	56.95	0.19		18	26	11.0	2.70	7.13	0.0914572	22	57.6	26	4	33	9.3		4	14	23.6	9.6678049		
24	21	10	3.81	0.19		18	4	57.3	2.68	7.07	0.0949936	22	59.8	26	7	19	28.6		4	30	17.2	9.6668747		
25	21	16	13.06	0.19		17	42	25.6	2.66	7.01	0.0983772	23	0	27	0	6	44.0		4	45	37.4	9.6656827		
26	21	22	24.59	0.18		17	18	35.9	2.64	6.96	0.1016110	23	4.3	27	2	55	8.1		5	0	22.4	9.6642288		
27	21	28	38.22	0.18		16	53	28.0	2.62	6.91	0.1046968	23	6.6	27	5	44	53.7		5	14	30.4	9.6625119		
28	21	34	53.92	0.18	S. 16	27	1.8	2.61	6.87	0.1076366	23	9.0	27	8	36	14.0	S. 5	27	59.3	9.6605312				
29	21	41	11.60	0.18		15	59	17.5	2.59	6.82	0.1104319	23	11.4	28	1	29	22.4		5	40	46.8	9.6582855		
Mar. 1	21	47	31.20	0.18		15	30	15.2	2.58	6.78	0.1130832	23	13.8	28	4	24	32.8		5	52	50.2	9.6557738		
2	21	53	52.67	0.18		14	59	54.9	2.56	6.74	0.1155905	23	16.2	28	7	21	59.5		6	4	7.0	9.6529952		
3	22	0	15.99	0.18		14	28	16.6	2.55	6.71	0.1179537	23	18.7	29	0	21	57.2		6	14	33.9	9.6499490		
4	22	6	41.16	0.17		13	55	20.5	2.53	6.67	0.1201721	23	21.2	29	3	24	41.1		6	24	7.5	9.6466344		
5	22	13	8.15	0.17	S. 13	21	7.0	2.52	6.64	0.1222437	23	23.8	29	6	30	27.2	S. 6	32	44.2	9.6430509				
6	22	19	36.99	0.17		12	45	36.0	2.50	6.61	0.1241665	23	26.4	29	9	39	32.0		6	40	19.7	9.6391988		
7	22	26	7.71	0.17		12	8	48.0	2.49	6.58	0.1259377	23	29.0	30	2	52	12.5		6	46	49.7	9.6350784		
8	22	32	40.36	0.17		11	30	43.1	2.48	6.56	0.1275533	23	31.6	30	6	8	46.6		6	52	9.1	9.6306909		
9	22	39	14.96	0.17		10	51	22.1	2.48	6.54	0.1290091	23	34.3	30	9	29	32.7		6	56	12.6	9.6260386		
10	22	45	51.61	0.17		10	10	45.0	2.47	6.52	0.1302998	23	37.0	31	2	54	50.1		6	58	54.4	9.6211244		
11	22	52	30.36	0.17	S. 9	28	52.7	2.47	6.50	0.1314184	23	39.7	31	6	24	58.7	S. 7	0	8.0	9.6159529				
12	22	59	11.28	0.17		8	45	45.9	2.46	6.49	0.1323584	23	42.5	32	0	19	2		6	59	46.8	9.6105304		
13	23	5	54.46	0.17		8	1	25.4	2.46	6.48	0.1331109	23	45.3	32	4	12	7		6	57	43.4	9.6048645		
14	23	12	39.97	0.17		7	15	52.3	2.46	6.47	0.1336663	23	48.2	32	7	28	1.1		6	53	50.1	9.5989661		
15	23	19	27.92	0.16		6	29	7.7	2.45	6.46	0.1340142	23	51.1	33	1	21	6.6		6	47	58.7	9.5928484		
16	23	26	18.35	0.16		5	41	13.3	2.45	6.46	0.1341417	23	54.0	33	5	20	51.7		6	40	0.9	9.5865275		
17	23	33	11.36	0.16	S. 4	52	10.8	2.45	6.46	0.1340363	23	57.0	33	9	27	39.0	S. 6	29	47.9	9.5800243				
18	23	40	7.00	0.16		4	2	2.5	2.46	6.47	0.1336821	*	*	34	3	41	50.6		6	17	11.1	9.5733631		
19	23	47	5.31	0.16		3	10	50.8	2.46	6.48	0.1330636	0	0.1	34	8	3	48.2		6	2	2.2	9.5665741		
20	23	54	6.31	0.16		2	18	38.8	2.47	6.49	0.1321624	0	3.2	35	2	33	52.2		5	44	13.2	9.5596925		
21	0	1	9.98	0.16		1	25	30.2	2.47	6.51	0.1309596	0	6.3	35	7	12	21.6		5	23	37.1	9.5527601		
22	0	8	16.26	0.17	S. 0	31	29.3	2.48	6.53	0.1294345	0	9.5	1	59	32.6	5	0	8.3		5	45	58.2	9.5458253	
23	0	15	25.06	0.17	N. 0	23	19.0	2.49	6.56	0.1275651	0	12.7	6	55	38.5	S. 4	33	43.0	9.5389437					
24	0	22	36.19	0.17		1	18	48.9	2.50	6.59	0.1253286	0	15.9	12	0	48.2		4	4	20.4	9.5321780			
25	0	29	49.43	0.17		2	14	53.8	2.52	6.63	0.1227012	0	19.2	17	15	5.9		3	32	2.5	9.5255984			
26	0	37	4.46	0.17		3	11	25.6	2.54	6.68	0.1196589	0	22.5	22	3	28.8		2	56	5.5	9.5192816			
27	0	44	20.85	0.17		4	8	16.1	2.56	6.73	0.1161782	0	25.8	28	10	47.7		2	19	10.6	9.5133096			
28	0	51	38.07	0.17		5	5	15.4	2.58	6.79	0.1122357	0	29.2	33	5	144.0		1	39	4.0	9.5077690			
29	0	58	55.52	0.18	N. 6	2	13.0	2.61	6.86	0.1078101	0	32.6	39	40	50.1	S. 0	56	57.8	9.5027474					
30	1	6	12.42	0.18		6	58	57.3	2.64	6.94	0.1028817	0	35.9	45	37	28.2	S. 0	13	19.8	9.4983318				
31	1	13	27.93	0.18		7	55	15.4	2.67	7.03	0.0974340	0	39.2	51	40	49.7	N. 0	31	16.5	9.4946043				
Apr. 1	1	20	41.05	0.18		8	50	54.6	2.71	7.13	0.0914551	0	42.5	57	49	55.6		1	16	12.7	9.4916385			
2	1	27	50.72	0.19	N. 9	45	41.3	2.75	7.24	0.0849371	0	45.7	64	3	36.8	N. 2	0	47.2	9.4894965					

MEAN TIME.

Date.	Apparent Right Ascension.			Sid. Time of Semid. pass [†] Merid.	Apparent Declination.			Semidiameter.	Hor. Par.	Log. of True Dist. from the Earth.			Meridian Passage.	Heliocentric Longitude.			Heliocentric Latitude.			Log. of Rad. Vect.		
	Noon.				Noon.					Noon.				Noon.			Noon.					
Apr.	h	m	s	s	°	'	"	"	"				h	m	°	'	"	°	'	"		
	2	1	27	50.72	0.19	N.	9 45 41.3	2.75	7.24	0.0849371	0 45.7	64	3 36.8	N. 2	0 47.2	9.4894965						
	3	1	34	55.74	0.19		10 39 21.5	2.79	7.35	0.0778769	0 48.9	70	20 35.5		2 44 16.2	9.4882249						
	4	1	41	54.87	0.19		11 31 41.7	2.84	7.48	0.0702775	0 51.9	76	39 27.0		3 25 56.0	9.4878519						
	5	1	48	46.82	0.20		12 22 29.0	2.89	7.63	0.0621476	0 54.8	82	58 42.1		4 5 5.2	9.4883857						
	6	1	55	30.25	0.20		13 11 30.2	2.95	7.78	0.0535019	0 57.6	89	16 49.7		4 41 6.6	9.4898146						
	7	2	2	3.85	0.21		13 58 34.1	3.01	7.94	0.0443603	1 0.2	95	32 20.1		5 13 28.9	9.4921067						
	8	2	8	26.30	0.21	N.	14 43 30.0	3.08	8.12	0.0347481	1 2.7	101	43 47.6	N. 5	41 48.0	9.4952128						
	9	2	14	36.33	0.22		15 26 8.7	3.16	8.31	0.0246948	1 4.9	107	49 53.5		6 5 47.9	9.4990684						
	10	2	20	32.71	0.22		16 6 22.2	3.24	8.52	0.0142338	1 6.9	113	49 27.8		6 25 20.1	9.5035980						
	11	2	26	14.28	0.23		16 44 3.9	3.32	8.73	0.0034014	1 8.6	119	41 31.3		6 40 24.0	9.5087181						
	12	2	31	39.97	0.24		17 19 8.3	3.40	8.96	9.9922366	1 10.1	125	25 16.1		6 51 5.2	9.5143417						
	13	2	36	48.76	0.24		17 51 31.2	3.49	9.20	9.9807803	1 11.3	131	0 5.8		6 57 34.8	9.5203811						
	14	2	41	39.72	0.25	N.	18 21 9.3	3.59	9.45	9.9690745	1 12.2	136	25 35.3	N. 7	0 8.1	9.5267506						
	15	2	46	11.98	0.26		18 48 0.2	3.69	9.72	9.9571632	1 12.8	141	41 29.9		6 59 3.1	9.5333686						
	16	2	50	24.77	0.27		19 12 2.1	3.79	9.99	9.9450910	1 13.0	146	47 44.0		6 54 39.5	9.5401599						
	17	2	54	17.37	0.28		19 33 13.8	3.90	10.27	9.9329033	1 12.9	151	44 20.4		6 47 17.7	9.5470554						
	18	2	57	49.15	0.29		19 51 34.7	4.01	10.56	9.9206471	1 12.5	156	31 28.0		6 37 18.1	9.5539937						
	19	3	0	59.56	0.29		20 7 4.2	4.13	10.87	9.9083705	1 11.7	161	9 21.5		6 25 0.4	9.5609204						
	20	3	3	48.16	0.30	N.	20 19 42.2	4.25	11.18	9.8961232	1 10.5	165	38 19.4	N. 6	10 43.1	9.5677884						
	21	3	6	14.57	0.31		20 29 28.8	4.37	11.50	9.8839563	1 9.0	169	58 43.3		5 54 43.6	9.5745571						
	22	3	8	18.54	0.32		20 36 24.4	4.49	11.82	9.8719228	1 7.1	174	10 56.8		5 37 17.6	9.5811922						
	23	3	9	59.93	0.33		20 40 29.3	4.61	12.14	9.8600778	1 4.9	178	15 25.2		5 18 39.4	9.5876647						
	24	3	11	18.76	0.34		20 41 44.7	4.73	12.47	9.8484787	1 2.2	182	12 34.0		4 59 1.6	9.5939507						
	25	3	12	15.19	0.35		20 40 11.8	4.86	12.80	9.8371845	0 59.2	186	2 49.2		4 38 35.6	9.6000310						
	26	3	12	49.56	0.36	N.	20 35 52.7	4.99	13.13	9.8262566	0 55.9	189	46 36.5	N. 4	17 31.2	9.6058891						
	27	3	13	2.39	0.37		20 28 50.0	5.11	13.45	9.8157576	0 52.1	193	24 21.2		3 55 57.1	9.6115125						
	28	3	12	54.43	0.37		20 19 7.5	5.22	13.76	9.8057513	0 48.0	196	56 28.0		3 34 0.9	9.6168911						
	29	3	12	26.67	0.38		20 6 50.4	5.34	14.06	9.7963019	0 43.6	200	23 20.6		3 11 49.2	9.6220173						
	30	3	11	40.29	0.39		19 52 5.0	5.45	14.35	9.7874726	0 38.9	203	45 22.1		2 49 27.6	9.6268852						
May	1	3	10 36.76	0.40		19 34 59.5	5.55	14.62	9.7793252	0 33.9	207	2 54.3		2 27 1.0	9.6314908							
	2	3	9 17.73	0.40	N.	19 15 43.7	5.65	14.88	9.7719185	0 28.7	210	16 18.3	N. 2	4 33.7	9.6358308							
	3	3	7 45.11	0.41		18 54 29.7	5.73	15.11	9.7653064	0 23.2	213	25 54.3		1 42 9.2	9.6399037							
	4	3	6 0.98	0.41		18 31 31.2	5.81	15.31	9.7595372	0 17.6	216	32 1.5		1 19 50.8	9.6437082							
	5	3	4 7.59	0.41		18 7 4.1	5.87	15.48	9.7546512	0 11.8	219	34 58.2		0 57 41.1	9.6472440							
	6	3	2 7.32	0.42		17 41 25.8	5.93	15.62	9.7506809	{ 0 5.8 23 59.8 }	222	35 2.0		0 35 42.5	9.6505110							
	7	3	0 2.60	0.42		17 14 55.3	5.97	15.73	9.7476488	23 53.8	225	32 29.6	N. 0	13 57.0	9.6535096							
	8	2	57 55.90	0.42	N.	16 47 52.6	6.00	15.81	9.7455664	23 47.8	228	27 37.1	S. 0	7 33.6	9.6562406							
	9	2	55 49.66	0.42		16 20 38.4	6.02	15.85	9.7444348	23 41.8	231	20 39.9		0 28 47.7	9.6587050							
	10	2	53 46.24	0.42		15 53 33.6	6.02	15.86	9.7442447	23 35.9	234	11 52.9		0 49 43.9	9.6609036							
	11	2	51 47.85	0.42		15 26 58.7	6.01	15.83	9.7449758	23 30.1	237	1 30.3		1 10 20.9	9.6628375							
	12	2	49 56.59	0.41		15 1 12.8	5.99	15.77	9.7465993	23 24.5	239	49 46.1		1 30 37.5	9.6645077							
	13	2	48 14.30	0.41		14 36 34.9	5.95	15.68	9.7490773	23 19.1	242	36 53.7		1 50 32.7	9.6659149							
	14	2	46 42.65	0.41	N.	14 13 21.2	5.91	15.56	9.7523650	23 13.8	245	23 6.2	S. 2	10 5.3	9.6670603							
	15	2	45 23.07	0.40		13 51 46.7	5.85	15.42	9.7564130	23 8.8	248	8 36.5		2 29 14.4	9.6679443							
	16	2	44 16.77	0.40		13 32 3.9	5.79	15.25	9.7611676	23 4.0	250	53 37.0		2 47 58.9	9.6685376							
	17	2	43 24.71	0.39		13 14 23.1	5.72	15.06	9.7665724	22 59.4	253	38 20.3		3 6 17.7	9.6689606							
	18	2	42 47.68	0.39	N.	12 58 52.8	5.64	14.86	9.7725697	22 55.1	256	22 58.7	S. 3	24 9.8	9.6690335							

MERCURY, 1924.

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MEAN TIME.

Date	Apparent Right Ascension.			Sid. Time of Semid. pass Merid.	Apparent Declination.			Semidiameter.	Hor. Par.	Log of True Dist. from the Earth.	Meridian Passage.	Heliocentric Longitude.			Heliocentric Latitude.	Log. of Rad. Vect.
	Noon.				Noon.							Noon.				
	h	m	s	s	°	'	"	"	"		h	m	°	'	"	
May 18	2 42	47.68	0.39		N.12 58	52	8	5.64	14.86	9.7725697	22 55.1	256 22 58.7	S. 3 24	9.8		9.6690335
19	2 42	26.24	0.38		12 45	38	7	5.56	14.63	.7791029	22 51.1	259 7 44.4	3 41	33.9		.6688766
20	2 42	20.79	0.37		12 34	45	4	5.47	14.40	.7861158	22 47.3	261 52 49.5	3 58	28.9		.6684595
21	2 42	31.57	0.36		12 26	14	9	5.38	14.16	.7935544	22 43.8	264 38 26.2	4 14	53.4		.6677820
22	2 42	58.67	0.36		12 20	7	9	5.28	13.90	.8013671	22 40.6	267 24 47.0	4 30	46.0		.6668438
23	2 43	42.11	0.35		12 16	23	9	5.18	13.64	.8095061	22 37.7	270 12 4.2	4 46	5.2		.6656440
24	2 44	41.79	0.35		N.12 15	0	8	5.08	13.38	9.8179261	22 35.0	273 0 30.5	S. 5 04	9.1		9.6641821
25	2 45	57.55	0.34		12 15	55	7	4.98	13.11	.8265860	22 32.5	275 50 18.7	5 14	55.9		.6624571
26	2 47	29.15	0.33		12 19	4	8	4.88	12.85	.8354474	22 30.4	278 41 41.9	5 28	23.5		.6604683
27	2 49	16.37	0.33		12 24	23	8	4.78	12.59	.8444760	22 28.5	281 34 53.7	5 41	9.7		.6582146
28	2 51	18.93	0.32		12 31	47	7	4.68	12.33	.8536408	22 26.8	284 30 7.9	5 53	11.7		.6556947
29	2 53	36.57	0.32		12 41	11	3	4.58	12.07	.8629135	22 25.4	287 27 38.9	6 4	27.0		.6529079
30	2 56	9.01	0.31		N.12 52	29	0	4.48	11.81	9.8722685	22 24.2	290 27 41.3	S. 6 14	52.3		9.6498536
31	2 58	55.99	0.30		13 5	34	9	4.38	11.56	.8816832	22 23.2	293 30 30.4	6 24	24.2		.6465306
June 1	3 1	57.27	0.29		13 20	23	1	4.29	11.31	.8911367	22 22.5	296 36 22.2	6 32	59.1		.6429391
2	3 5	12.63	0.29		13 36	47	7	4.20	11.06	.9006102	22 22.1	299 45 33.2	6 40	32.7		.6390785
3	3 8	41.89	0.28		13 54	42	3	4.11	10.82	.9100869	22 21.8	302 58 20.5	6 47	0.6		.6349497
4	3 12	24.88	0.28		14 14	1	0	4.02	10.59	.9195510	22 21.8	306 15 1.8	6 52	17.8		.6305541
5	3 16	21.48	0.27		N.14 34	37	5	3.93	10.36	9.9289881	22 22.0	309 35 55.8	S. 6 56	18.9		9.6258936
6	3 20	31.60	0.27		14 56	25	5	3.85	10.14	.9383845	22 22.5	313 1 21.7	6 58	58.0		.6209714
7	3 24	55.17	0.26		15 19	18	6	3.77	9.93	.9477272	22 23.1	316 31 39.5	7 0	8.9		.6157920
8	3 29	32.19	0.26		15 43	10	5	3.69	9.72	.9570038	22 24.0	320 7 9.7	6 59	44.6		.6103617
9	3 34	22.66	0.25		16 7	54	8	3.61	9.51	.9662019	22 25.1	323 48 13.6	6 57	38.0		.6046883
10	3 39	26.63	0.25		16 33	24	6	3.53	9.31	.9753094	22 26.5	327 35 13.1	6 53	41.2		.5987827
11	3 44	44.16	0.24		N.16 59	33	2	3.46	9.12	9.9843131	22 28.0	331 28 30.4	S. 6 47	46.1		9.5926581
12	3 50	15.36	0.24		17 26	13	6	3.39	8.94	.99932005	22 29.8	335 28 28.0	6 39	44.2		.5863312
13	3 56	0.35	0.23		17 53	18	3	3.33	8.76	0.0019578	22 31.8	339 35 28.5	6 29	27.0		.5798224
14	4 1	59.26	0.23		18 20	39	8	3.26	8.59	.0105705	22 34.1	343 49 54.0	6 16	45.7		.5731566
15	4 8	12.23	0.23		18 48	10	0	3.20	8.42	.0190233	22 36.6	348 12 6.1	6 1	32.0		.5663637
16	4 14	39.41	0.22		19 15	40	6	3.14	8.26	.0272995	22 39.3	352 42 25.4	5 43	38.0		.5594795
17	4 21	20.90	0.22		N.19 43	2	6	3.08	8.11	0.0335814	22 42.3	357 21 10.6	S. 5 22	56.6		9.5525458
18	4 28	16.80	0.21		20 10	6	8	3.02	7.97	.0432498	22 45.5	2 8 37.9	4 59	22.4		.5456114
19	4 35	27.17	0.21		20 36	43	1	2.97	7.83	.0508844	22 49.0	7 5 0.4	4 32	51.8		.5387319
20	4 42	51.99	0.21		21 2	41	1	2.92	7.70	.0582635	22 52.7	12 10 27.1	4 3	23.7		.5319703
21	4 50	31.18	0.20		21 27	50	0	2.88	7.57	.0653642	22 56.7	17 25 1.6	3 31	0.5		.5253971
22	4 58	24.51	0.20		21 51	58	3	2.83	7.45	.0721625	23 0.9	22 48 41.5	2 55	48.5		.5190892
23	5 6	31.70	0.20		N.22 14	54	3	2.79	7.34	0.0786340	23 5.3	28 21 16.8	S. 2 17	58.9		9.5131288
24	5 14	52.26	0.20		22 36	25	8	2.75	7.24	.0847539	23 9.9	34 2 29.0	1 37	48.3		.5076024
25	5 23	25.59	0.20		22 56	20	7	2.71	7.14	.0904975	23 14.7	39 51 50.0	0 55	38.7		.5025976
26	5 32	10.88	0.19		23 14	27	1	2.68	7.06	.0958413	23 19.7	45 48 41.6	S. 0 11	58.4		.4982016
27	5 41	7.16	0.19		23 30	33	3	2.65	6.98	.1007631	23 24.9	51 52 15.1	N. 0 32	39.2		.4944958
28	5 50	13.29	0.19		23 44	28	2	2.62	6.91	.1052430	23 30.2	58 1 31.1	1 17	35.5		.4915542
29	5 59	27.93	0.19		N.23 56	1	9	2.60	6.84	0.1092640	23 35.6	64 15 20.1	N. 2 2	8.7		9.4894380
30	6 8	49.60	0.19		24 5	5	5	2.58	6.79	.1128131	23 41.2	70 32 24.2	2 45	35.0		.4881936
July 1	6 18	16.71	0.19		24 11	31	8	2.56	6.74	.1158812	23 46.8	76 51 18.4	3 27	10.8		.4878484
2	6 27	47.58	0.19		24 15	15	2	2.54	6.70	.1184636	23 52.4	83 10 33.3	4 6	14.8		.4884100
3	6 37	20.45	0.19		N.24 16	12	1	2.53	6.67	0.1205610	23 58.0	89 28 38.1	N. 4 42	10 0		9.4898660

MEAN TIME.

Date.	Apparent Right Ascension.			Sid. Time of Semi-diurnal Merid	Apparent Declination.			Semidiameter.	Hor. Par.	Log. of True Dist. from the Earth.		Meridian Passage.	Heliocentric Longitude.			Heliocentric Latitude.			Log. of Rad. Vect.		
	Noon.				Noon.					Noon			Noon.			Noon.					
	h	m	s	s	°	'	"	"	"			h	m	°	'	"	°	'	"		
July	3	6	37	20.45	0.19	N.24	16	12.1	2.53	6.67	0.1205610	23	58	0	89	28	38.1	N.4	42	10.0	9.4898660
	4	6	46	53.62	0.18	24	14	20.6	2.52	6.64	.1221782	*	*		95	44	2.9	5	14	25.1	.4921842
	5	6	56	25.40	0.18	24	9	40.8	2.51	6.62	.1233248	0	3.6		101	55	22.2	5	42	36.5	.4953146
	6	7	5	54.18	0.18	24	2	15.0	2.51	6.61	.1240138	0	9.2		108	1	17.5	6	6	28.2	.4991923
	7	7	15	18.49	0.18	23	52	6.5	2.51	6.61	.1242619	0	14.7		114	0	39.3	6	25	52.2	.5037416
	8	7	24	36.98	0.18	23	39	20.6	2.51	6.61	.1240885	0	20.1		119	52	28.6	6	40	47.8	.5088790
	9	7	33	48.48	0.18	N.23	24	3.3	2.51	6.62	0.1235146	0	25.3		125	35	57.9	N.6	51	21.0	9.5145172
	10	7	42	51.97	0.18	23	6	22.1	2.52	6.64	.1225626	0	30.4		131	10	31.0	6	57	43.1	.5205683
	11	7	51	46.63	0.18	22	46	24.7	2.53	6.66	.1212554	0	35.4		136	35	43.3	7	0	9.3	.5269470
	12	8	0	31.75	0.18	22	24	19.4	2.54	6.68	.1196158	0	40.2		141	51	20.3	6	58	57.8	.5335720
	13	8	9	6.81	0.18	22	0	14.9	2.55	6.71	.1176663	0	44.9		146	57	16.8	6	54	28.3	.5403679
	14	8	17	31.42	0.18	21	34	19.8	2.56	6.74	.1154285	0	49.4		151	53	35.6	6	47	1.3	.5472660
	15	8	25	45.32	0.18	N.21	6	42.8	2.58	6.78	0.1129226	0	53.7		156	40	26.1	N.6	36	57.1	9.5542051
	16	8	33	48.32	0.18	20	37	32.2	2.59	6.83	.1101675	0	57.8		161	18	2.9	6	24	35.4	.5611310
	17	8	41	40.36	0.19	20	6	56.3	2.61	6.88	.1071813	1	1.7		165	46	44.7	6	10	14.7	.5679969
	18	8	49	21.44	0.19	19	35	2.9	2.63	6.93	.1039800	1	5.4		170	6	53.2	5	54	12.2	.5747623
	19	8	56	51.61	0.19	19	1	59.6	2.65	6.98	.1005780	1	9.0		174	18	52.1	5	36	43.8	.5813931
	20	9	4	10.98	0.19	18	27	53.7	2.67	7.04	.0969886	1	12.4		178	23	6.5	5	18	3.5	.5878607
21	9	11	19.70	0.19	N.17	52	51.8	2.70	7.10	0.0932234	1	15.6		182	20	2.1	N	4	58	24.0	9.5941408
22	9	18	17.91	0.19	17	17	0.4	2.72	7.16	.0892927	1	18.6		186	10	4.9	4	37	56.6	.6002145	
23	9	25	5.82	0.19	16	40	25.8	2.75	7.23	.0852057	1	21.5		189	53	40.7	4	16	51.1	.6060657	
24	9	31	43.61	0.19	16	3	13.7	2.77	7.30	.0809701	1	24.2		193	31	14.5	3	55	16.2	.6116819	
25	9	38	11.48	0.19	15	25	29.5	2.80	7.38	.0765927	1	26.7		197	3	11.2	3	33	19.5	.6170530	
26	9	44	29.63	0.20	14	47	18.4	2.83	7.45	.0720789	1	29.0		200	29	54.5	3	11	7.4	.6221714	
27	9	50	38.25	0.20	N.14	8	45.4	2.86	7.53	0.0674341	1	31.2		203	51	47.2	N.2	48	45.5	9.6270315	
28	9	56	37.53	0.20	13	29	55.2	2.89	7.61	.0626615	1	33.2		207	9	11.4	2	26	18.8	.6316290	
29	10	2	27.62	0.20	12	50	52.2	2.92	7.70	.0577646	1	35.1		210	22	28.0	2	3	51.5	.6359611	
30	10	8	8.69	0.20	12	11	40.8	2.95	7.79	.0527458	1	36.9		213	31	57.2	1	41	27.2	.6400258	
31	10	13	40.87	0.20	11	32	25.0	2.99	7.88	.0476066	1	38.5		216	37	58.2	1	19	9.0	.6438221	
Aug.	1	10	19	4.28	0.21	10	53	9.0	3.03	7.98	.0423482	1	39.9		219	40	49.2	0	56	59.6	.6473495
	2	10	24	19.01	0.21	N.10	13	56.6	3.07	8.08	0.0369714	1	41.2		222	40	47.9	N.0	35	1.4	9.6506083
	3	10	29	25.12	0.21	9	34	51.6	3.11	8.18	.0314764	1	42.3		225	38	10.8	N.0	13	16.4	.6535986
	4	10	34	22.68	0.21	8	55	58.0	3.15	8.29	.0258628	1	43.3		228	33	14.1	S.0	8	13.7	.6563215
	5	10	39	11.68	0.22	8	17	19.3	3.19	8.40	.0201304	1	44.2		231	26	13.3	0	29	27.3	.6587777
	6	10	43	52.13	0.22	7	38	59.4	3.24	8.52	.0142783	1	44.9		234	17	23.0	0	50	22.9	.6609681
	7	10	48	23.97	0.22	7	1	2.0	3.28	8.63	.0083059	1	45.5		237	6	57.7	1	10	59.3	.6628937
	8	10	52	47.14	0.22	N.6	23	30.9	3.32	8.75	0.0022121	1	45.9		239	55	11.1	S.1	31	15.3	9.6645558
	9	10	57	1.53	0.23	5	46	30.2	3.37	8.88	.9959959	1	46.2		242	42	16.8	1	51	9.7	.6659549
	10	11	1	6.99	0.23	5	10	3.7	3.42	9.01	.9896564	1	46.4		245	28	27.8	2	10	4.1	.6679023
	11	11	5	3.35	0.23	4	34	15.7	3.47	9.15	.9831931	1	46.4		248	13	56.8	2	29	50.0	.6679681
	12	11	8	50.39	0.23	3	59	10.4	3.53	9.29	.9766054	1	46.2		250	58	56.6	2	48	33.7	.6685833
	13	11	12	27.85	0.24	3	24	52.4	3.58	9.43	.9698931	1	45.8		253	43	39.6	3	6	51.6	.6689385
	14	11	15	55.42	0.24	N.2	51	26.5	3.64	9.58	9.9630570	1	45.3		256	28	17.9	S.3	24	42.8	9.6690335
	15	11	19	12.77	0.25	2	18	57.8	3.70	9.74	.9560979	1	44.7		259	13	3.9	3	42	6.1	.6688683
	16	11	22	15.48	0.25	1	47	31.5	3.76	9.90	.9490180	1	43.8		261	58	9.8	3	59	0.1	.6684430
	17	11	25	15.13	0.25	1	17	13.3	3.82	10.06	.9418206	1	42.8		264	43	47.7	4	15	23.7	.6677573
	18	11	27	59.21	0.26	N.0	48	9.4	3.88	10.23	9.9345101	1	41.6		267	30	10.0	S.4	31	15.3	9.6668108

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MEAN TIME.

Date.	Apparent Right Ascension.			Sid. Time of Semid. pass. Merid	Apparent Declination.			Semidiameter.	Hor. Par.	Log. of True Dist. from the Earth.	Meridian Passage.	Heliocentric Longitude.			Heliocentric Latitude.			Log. of Rad. Vect.			
	Noon.				Noon.							Noon.			Noon.						
	h	m	s	s	°	'	"	"	"	°	'	"	h	m	°	'	"	°	'	"	
Aug. 18	11	27	59.21	0.26	N.	0	48	9.4	3.88	10.23	9.9345101	1	41.6	267	30	10.0	S.	4	31	15.3	9.6668108
19	11	30	31.17	0.26	N.	0	20	26.4	3.95	10.41	.9270925	1	40.2	270	17	29.1		4	46	33.3	.6656029
20	11	32	50.41	0.27	S.	0	5	48.7	4.02	10.59	.9195763	1	38.6	273	5	57.7		5	1	16.1	.6641328
21	11	34	56.28	0.27		0	30	28.3	4.09	10.78	.9119722	1	36.7	275	55	48.6		5	15	21.7	.6623996
22	11	36	48.07	0.28		0	53	24.3	4.17	10.97	.9042936	1	34.6	278	47	15.0		5	28	48.1	.6604025
23	11	38	25.04	0.28		1	14	27.8	4.24	11.17	.8965579	1	32.3	281	40	30.4		5	41	32.9	.6581405
24	11	39	46.39	0.29	S.	1	33	29.5	4.32	11.37	9.8887864	1	29.7	284	35	48.6	S.	5	53	33.6	9.6556123
25	11	40	51.31	0.29		1	50	19.4	4.39	11.57	.8810047	1	26.8	287	33	24.0		6	4	47.3	.6528173
26	11	41	38.97	0.30		2	4	47.0	4.47	11.78	.8732449	1	23.6	290	33	31.3		6	15	11.0	.6497544
27	11	42	8.55	0.30		2	16	41.2	4.55	11.99	.8655446	1	20.2	293	36	25.9		6	24	41.2	.6464231
28	11	42	19.26	0.31		2	25	50.5	4.63	12.20	.8579490	1	16.4	296	42	23.6		6	33	14.2	.6428230
29	11	42	10.37	0.31		2	32	3.3	4.71	12.41	.8505108	1	12.3	299	51	41.0		6	40	45.8	.6389542
30	11	41	41.25	0.32	S.	2	35	8.0	4.79	12.62	9.8432918	1	7.9	303	4	35.3	S.	6	47	11.6	9.6348171
31	11	40	51.46	0.32		2	34	53.5	4.87	12.82	.8363627	1	3.1	306	21	24.2		6	52	26.5	.6304131
Sept. 1	11	39	40.70	0.33		2	31	9.4	4.94	13.02	.8298040	0	58.0	309	42	26.4		6	56	25.1	.6257443
2	11	38	9.02	0.33		2	23	46.9	5.01	13.21	.8237056	0	52.5	313	8	1.0		6	59	1.6	.6208139
3	11	36	16.77	0.34		2	12	39.4	5.08	13.38	.8181665	0	46.7	316	38	28.2		7	0	9.6	.6156265
4	11	34	4.72	0.34		1	57	43.3	5.14	13.53	.8132935	0	40.6	320	14	8.5		6	59	42.3	.6101884
5	11	31	34.17	0.35	S.	1	38	58.9	5.18	13.65	9.8091992	0	34.2	323	55	23.2	S.	6	57	32.3	9.6045076
6	11	28	46.91	0.35		1	16	31.3	5.22	13.76	.8059980	0	27.5	327	42	34.1		6	53	31.9	.5985949
7	11	25	45.36	0.35		0	50	31.1	5.25	13.83	.8038041	0	20.5	331	36	3.6		6	47	33.0	.5924637
8	11	22	32.51	0.35	S.	0	21	15.2	5.26	13.86	.8027248	0	13.4	335	36	14.0		6	39	27.0	.5861307
9	11	19	11.98	0.35	N.	0	10	53.0	5.26	13.86	.8028562	{ 0 6.1 21 58.8		339	43	28.0		6	29	5.4	.5796166
10	11	15	47.87	0.35		0	45	23.5	5.24	13.81	.8042771	23	51.5	343	58	7.8		6	16	19.5	.5729463
11	11	12	24.72	0.35	N.	1	21	40.3	5.21	13.72	9.8070431	23	44.3	348	20	34.8	S.	6	1	0.9	9.5661501
12	11	9	7.39	0.34		1	59	2.7	5.16	13.59	.8111834	23	37.3	352	51	9.6		5	43	1.8	.5592637
13	11	6	0.79	0.34		2	36	46.5	5.10	13.42	.8166963	23	30.5	357	30	10.8		5	22	15.2	.5523292
14	11	3	9.81	0.33		3	14	5.6	5.02	13.21	.8235488	23	24.1	2	17	54.6		4	58	35.5	.5453956
15	11	0	39.07	0.33		3	50	14.2	4.92	12.97	.8316765	23	18.1	7	14	34.0		4	31	59.3	.5385186
16	10	58	32.76	0.32		4	24	28.3	4.82	12.69	.8409874	23	12.5	12	20	17.8		4	2	25.7	.5317620
17	10	56	54.51	0.31	N.	4	56	7.6	4.70	12.39	9.8513641	23	7.5	17	35	9.4	S.	3	29	57.1	9.5251959
18	10	55	47.27	0.30		5	24	36.4	4.58	12.07	.8626714	23	3.0	22	59	6.3		2	54	40.0	.5188975
19	10	55	13.26	0.30		5	49	24.5	4.46	11.74	.8747601	22	59.0	28	31	58.0		2	16	45.8	.5129492
20	10	55	13.91	0.29		6	10	7.9	4.33	11.40	.8874737	22	55.7	34	13	25.9		1	36	31.0	.5074377
21	10	55	49.95	0.28		6	26	28.3	4.20	11.06	.9006540	22	52.9	40	3	1.6		0	54	18.2	.5024509
22	10	57	1.35	0.27		6	38	13.7	4.07	10.72	.9141454	22	50.7	46	0	6.6	S.	0	10	35.5	.4980752
23	10	58	47.46	0.26	N.	6	45	17.3	3.95	10.39	9.9277996	22	49.0	52	3	51.7	N.	0	34	3.2	9.4943921
24	11	1	7.04	0.25		6	47	37.7	3.82	10.07	.9414781	22	47.9	58	13	17.3		1	18	59.4	.4914754
25	11	3	58.40	0.25		6	45	17.8	3.70	9.76	.9550549	22	47.3	64	27	13.6		2	3	31.2	.4893859
26	11	7	19.46	0.24		6	38	24.7	3.59	9.46	.9684181	22	47.1	70	44	22.4		2	46	54.8	.4881692
27	11	11	7.86	0.23		6	27	8.8	3.49	9.18	.9814716	22	47.4	77	3	18.6		3	28	26.5	.4878522
28	11	15	21.07	0.22		6	11	43.3	3.39	8.92	9.9941347	22	48.0	83	22	32.8		4	7	25.1	.4884421
29	11	19	56.44	0.22	N.	5	52	23.8	3.29	8.67	0.0063419	22	49.0	89	40	33.9	N.	4	43	13.8	9.4899256
30	11	24	51.35	0.21		5	29	27.3	3.21	8.44	.0180428	22	50.2	95	55	52.2		5	15	21.7	.4922701
Oct. 1	11	30	3.17	0.21		5	3	12.7	3.13	8.23	.0292015	22	51.7	102	7	2.6		5	43	25.2	.4954248
2	11	35	29.50	0.21		4	33	58.3	3.05	8.03	.0397942	22	53.4	108	12	46.7		6	7	8.6	.4993248
3	11	41	8.02	0.20	N.	4	2	3.1	2.98	7.84	0.0498084	22	55.3	114	11	55.2	N.	6	26	24.1	9.5038938

MEAN TIME.

Date.	Apparent Right Ascension.			Sid. Time of Semid. pass st Merid.	Apparent Declination.			Semidiameter.	Hor. Par.	Log. of True Dist. from the Earth.			Meridian Passage.	Heliocentric Longitude.			Heliocentric Latitude.			Log. of Rad. Vect.	
	Noon.				Noon.					Noon.				Noon.			Noon.				
	h	m	s	s	°	'	"	"	"				h	m	°	'	"	°	'	"	
Oct.	3	11	41	8.02	0.20	N. 4	2	3.1	2.98	7.84	0.0498084	22	55.3	114	11	55.2	N. 6	26	24.1	9.5038938	
	4	11	46	56.63	0.20		3	27	45.9	7.92	0.0592415	22	57.3	120	3	29.5		6	41	11.5	5.090479
	5	11	52	53.44	0.19		2	51	24.7	7.86	0.0680981	22	59.4	125	46	42.4		6	51	36.7	5.147003
	6	11	58	56.79	0.19		2	13	16.8	7.80	0.0763900	23	1.5	131	20	58.3		6	57	51.1	5.207630
	7	12	5	5.23	0.18		1	33	38.1	7.75	0.0841331	23	3.9	136	45	52.8		7	0	10.3	5.271505
	8	12	11	17.52	0.18		0	52	43.6	7.71	0.0913470	23	6.2	142	1	11.7		6	58	52.3	5.337819
	9	12	17	32.60	0.18	N.	0	10	46.9	7.67	0.0980542	23	8.5	147	6	50.1	N. 6	54	17.0	9.5405820	
	10	12	23	49.62	0.18	N.	0	31	59.4	7.63	0.1042775	23	10.9	152	2	51.0		6	46	44.7	5.474821
	11	12	30	7.85	0.17		1	15	24.1	7.59	0.1100411	23	13.2	156	49	24.0		6	36	35.9	5.544217
	12	12	36	26.74	0.17		1	59	17.1	7.56	0.1153692	23	15.6	161	26	43.8		6	24	10.2	5.613466
	13	12	42	45.82	0.17		2	43	20.5	7.53	0.1202851	23	18.0	165	55	9.2		6	9	46.1	5.682099
	14	12	49	4.74	0.17		3	27	53.0	7.50	0.1248116	23	20.4	170	15	2.0		5	53	40.8	5.749715
	15	12	55	23.28	0.17	N.	4	12	20.9	7.48	0.1289708	23	22.7	174	26	46.1	N. 5	36	9.9	9.5815976	
	16	13	1	41.21	0.16		4	56	46.6	7.46	0.1327828	23	25.1	178	30	46.4		5	17	27.5	5.880595
	17	13	7	58.44	0.16		5	41	4.4	7.44	0.1362668	23	27.4	182	27	28.7		4	57	46.4	5.943335
	18	13	14	14.88	0.16		6	25	9.5	7.42	0.1394412	23	29.7	186	17	19.1		4	37	17.7	6.004004
	19	13	20	30.52	0.16		7	8	57.3	7.41	0.1423223	23	32.0	190	0	43.2		4	16	11.2	6.062444
	20	13	26	45.37	0.16		7	52	24.2	7.39	0.1449251	23	34.3	193	38	6.2		3	54	35.5	6.118531
	21	13	32	59.45	0.16	S.	8	35	26.4	7.38	0.1472637	23	36.6	197	9	52.8	N. 3	32	38.2	9.6172163	
	22	13	39	12.82	0.16		9	18	0.9	7.37	0.1493515	23	38.9	200	36	26.6		3	10	25.6	6.223267
23	13	45	25.57	0.16		10	0	4.9	7.36	0.1511992	23	41.2	203	58	10.7		2	48	3.6	6.271787	
24	13	51	37.78	0.16		10	41	35.9	7.35	0.1528178	23	43.4	207	15	26.8		2	25	36.8	6.317680	
25	13	57	49.54	0.16		11	22	31.5	7.34	0.1542166	23	45.7	210	28	36.1		2	3	9.6	6.360918	
26	14	4	0.96	0.16		12	2	49.6	7.34	0.1554040	23	47.9	213	37	58.5		1	40	45.4	6.401481	
27	14	10	12.17	0.16	S.	12	42	28.5	7.33	0.1563875	23	50.2	216	43	53.3	N. 1	18	27.4	9.6439359		
28	14	16	23.23	0.16		13	21	26.1	7.33	0.1571739	23	52.4	219	46	38.7		0	56	18.4	6.474549	
29	14	22	34.28	0.16		13	59	40.9	7.32	0.1577690	23	54.6	222	46	32.3		0	34	20.5	6.507053	
30	14	28	45.44	0.16		14	37	11.2	7.32	0.1581778	23	56.9	225	43	50.7	N. 0	12	35.9	5.636873		
31	14	34	56.80	0.16		15	13	55.5	7.32	0.1584050	23	59.1	228	38	49.9	S. 0	8	53.7	6.564018		
Nov.	1	14	41	8.47	0.16		15	49	52.5	7.32	0.1584544	*	*	231	31	45.5		0	30	6.7	6.588497
	2	14	47	20.56	0.16	S.	16	25	0.7	7.32	0.1583288	0	1.4	234	22	52.1	S. 0	51	1.7	9.6610318	
	3	14	53	33.15	0.16		16	59	18.5	7.32	0.1580310	0	3.7	237	12	24.0		1	11	37.5	6.629493
	4	14	59	46.35	0.16		17	32	45.2	7.32	0.1575630	0	6.0	240	0	35.2		1	31	52.9	6.6646032
	5	15	6	0.22	0.16		18	5	19.2	7.33	0.1569258	0	8.3	242	47	38.9		1	51	46.7	6.659942
	6	15	12	14.85	0.16		18	36	59.0	7.33	0.1561205	0	10.6	245	33	48.4		2	11	17.9	6.6671233
	7	15	18	30.32	0.16		19	7	43.5	7.34	0.1551470	0	12.9	248	19	16.4		2	30	25.4	6.6679910
	8	15	24	46.66	0.17	S.	19	37	31.3	7.34	0.1540054	0	15.2	251	4	15.6	S. 2	49	8.3	9.6685981	
	9	15	31	3.95	0.17		20	6	21.2	7.35	0.1526944	0	17.6	253	48	58.2		3	7	25.5	6.6689449
	10	15	37	22.21	0.17		20	34	11.9	7.36	0.1512130	0	19.9	256	33	36.7		3	25	15.9	6.6690318
	11	15	43	41.47	0.17		21	1	2.0	7.37	0.1495592	0	22.3	259	18	23.1		3	42	38.2	6.6688585
	12	15	50	1.73	0.17		21	26	50.3	7.38	0.1477301	0	24.7	262	3	29.8		3	59	31.3	6.6684252
	13	15	56	22.99	0.17		21	51	35.4	7.39	0.1457231	0	27.1	264	49	8.9		4	15	53.9	6.6677316
	14	16	2	45.23	0.17	S.	22	15	15.9	7.40	0.1435348	0	29.6	267	35	32.8	S. 4	31	44.5	9.6667771	
	15	16	9	8.41	0.17		22	37	50.3	7.41	0.1411607	0	32.0	270	22	53.9		4	47	1.5	6.6655611
	16	16	15	32.48	0.18		22	59	17.4	7.43	0.1385960	0	34.5	273	11	24.9		5	1	43.1	6.6640829
	17	16	21	57.33	0.18		23	19	35.6	7.44	0.1358356	0	37.0	276	1	18.6		5	15	47.5	6.6623416
	18	16	28	22.87	0.18	S.	23	38	43.6	7.46	0.1328736	0	39.4	278	52	48.2	S. 5	29	12.6	9.6603363	

MEAN TIME.

Date.	Apparent Right Ascension.			Sid. Time of Semid. pass ^W Merid.	Apparent Declination.			Semidiameter.	Hor. Par.	Log. of True Dist. from the Earth.			Meridian Passage.	Heliocentric Longitude.			Heliocentric Latitude.			Log. of Rad. Vect.
	Noon.				Noon.					Noon.				Noon.			Noon.			
	h	m	s	s	°	'	"	"	"	°	'	"	h	m	°	'	"	°	'	"
Nov. 18	16	28	22.87	0.18	S. 23	38	43.6	2.46	6.48	0.1328736	0	39.4	278	52	48.2	S. 5	29	12.6	9.6603363	
19	16	34	48.97	0.18	23	56	39.7	2.48	6.53	.1297034	0	41.9	281	46	7.2	5	41	56.1	.6580660	
20	16	41	15.46	0.18	24	13	23.0	2.50	6.58	.1263176	0	44.4	284	41	29.5	5	53	55.3	.6555297	
21	16	47	42.15	0.18	24	28	51.7	2.52	6.63	.1227082	0	47.0	287	39	9.4	6	5	7.5	.6527263	
22	16	54	8.80	0.19	24	43	4.2	2.54	6.69	.1188665	0	49.5	290	39	21.7	6	15	29.6	.6496552	
23	17	0	35.15	0.19	24	55	59.4	2.56	6.75	.1147836	0	52.0	293	42	21.8	6	24	58.1	.6463156	
24	17	7	0.86	0.19	S. 25	7	35.8	2.59	6.82	0.1104489	0	54.5	296	48	25.5	S. 6	33	29.2	9.6427072	
25	17	13	25.58	0.19	25	17	52.1	2.62	6.89	.1058505	0	56.9	299	57	49.4	6	40	58.9	.6388300	
26	17	19	48.89	0.20	25	26	47.0	2.65	6.97	.1009778	0	59.4	303	10	50.6	6	47	22.5	.6346847	
27	17	26	10.28	0.20	25	34	19.5	2.68	7.06	.0958181	1	1.8	306	27	47.1	6	52	35.1	.6302727	
28	17	32	29.21	0.20	25	40	28.4	2.72	7.15	.0903579	1	4.2	309	48	57.5	6	56	31.3	.6255958	
29	17	38	45.03	0.20	25	45	12.6	2.75	7.24	.0845826	1	6.5	313	14	40.9	6	59	5.1	.6206575	
30	17	44	57.03	0.21	S. 25	48	31.7	2.79	7.34	0.0784782	1	8.7	316	45	17.4	S. 7	0	10.2	9.6154623	
Dec. 1	17	51	4.36	0.21	25	50	25.0	2.83	7.45	.0720286	1	10.9	320	21	7.7	6	59	39.8	.6100167	
2	17	57	6.09	0.21	25	50	52.1	2.88	7.57	.0652181	1	13.0	324	2	33.1	6	57	26.5	.6043286	
3	18	3	1.19	0.22	25	49	53.1	2.92	7.70	.0580307	1	15.0	327	49	55.3	6	53	22.6	.5984092	
4	18	8	48.40	0.22	25	47	28.4	2.97	7.83	.0504502	1	16.8	331	43	36.8	6	47	19.8	.5922717	
5	18	14	26.39	0.22	25	43	38.6	3.03	7.98	.0424610	1	18.5	335	44	0.0	6	39	9.8	.5859328	
6	18	19	53.59	0.23	S. 25	38	25.0	3.09	8.14	0.0340479	1	20.0	339	51	27.4	S. 6	28	43.8	9.5794136	
7	18	25	8.28	0.23	25	31	49.5	3.15	8.30	.0251981	1	21.3	344	6	21.2	6	15	53.3	.5727391	
8	18	30	8.47	0.24	25	23	54.3	3.22	8.48	.0159009	1	22.3	348	29	3.0	6	0	29.9	.5659399	
9	18	34	51.97	0.24	25	14	42.5	3.30	8.68	0.0061491	1	23.1	352	59	53.1	5	42	25.6	.5590513	
10	18	39	16.30	0.25	25	4	18.1	3.37	8.88	9.9959417	1	23.5	357	39	10.1	5	21	33.7	.5521161	
11	18	43	18.74	0.25	24	52	45.7	3.46	9.10	.9852845	1	23.6	2	27	10.1	4	57	48.6	.5451835	
12	18	46	56.29	0.26	S. 24	40	10.8	3.55	9.34	9.9741928	1	23.3	7	24	6.1	S. 4	31	6.9	9.5383096	
13	18	50	5.68	0.26	24	26	39.9	3.64	9.59	.9626949	1	22.4	12	30	6.6	4	1	27.8	.5315579	
14	18	52	43.42	0.27	24	12	20.0	3.74	9.85	.9508350	1	21.1	17	45	15.1	3	28	53.9	.5249990	
15	18	54	45.85	0.28	23	57	19.5	3.85	10.13	.9386770	1	19.2	23	9	28.4	2	53	31.7	.5187103	
16	18	56	9.27	0.29	23	41	46.6	3.96	10.43	.9263093	1	16.6	28	42	36.2	2	15	32.9	.5127743	
17	18	56	50.11	0.29	23	25	50.4	4.07	10.73	.9138473	1	13.3	34	24	19.5	1	35	14.1	.5072777	
18	18	56	45.08	0.30	S. 23	9	39.9	4.19	11.04	9.9014390	1	9.2	40	14	9.5	S. 0	52	58.0	9.5023084	
19	18	55	51.54	0.31	22	53	23.7	4.31	11.36	.8892653	1	4.4	46	11	27.4	S. 0	9	13.2	.4979529	
20	18	54	7.81	0.32	22	37	10.5	4.43	11.67	.8775403	0	58.7	52	15	23.8	N. 0	35	26.7	.4942927	
21	18	51	33.59	0.32	22	21	7.7	4.55	11.97	.8665072	0	52.2	58	24	58.6	1	20	22.8	.4914006	
22	18	48	10.32	0.33	22	5	22.4	4.65	12.25	.8564301	0	44.9	64	39	1.9	2	4	53.1	.4893374	
23	18	44	1.56	0.34	21	50	1.4	4.75	12.50	.8475802	0	36.8	70	56	15.1	2	48	13.8	.4881480	
24	18	39	13.08	0.35	S. 21	35	11.7	4.83	12.71	9.8402174	0	28.1	77	15	13.0	N. 3	29	41.3	9.4878588	
25	18	33	52.91	0.35	21	21	1.3	4.89	12.88	.8345684	0	18.9	83	34	26.1	4	8	34.6	.4884765	
26	18	28	10.91	0.35	21	7	39.8	4.93	12.99	.8308060	0	9.3	89	52	23.4	4	44	16.9	.4899870	
27	18	22	18.25	0.35	20	55	18.3	4.95	13.04	.8290308	23	49.8	96	7	35.2	5	16	17.5	.4923571	
28	18	16	26.55	0.35	20	44	9.8	4.95	13.04	.8292607	23	40.3	102	18	36.6	5	44	13.1	.4955356	
29	18	10	47.02	0.35	20	34	27.1	4.92	12.97	.8314319	23	31.1	108	24	9.3	6	7	48.3	.4994571	
30	18	5	29.70	0.35	S. 20	26	22.9	4.88	12.86	9.8354065	23	22.4	114	23	4.6	N. 6	26	55.6	9.5040452	
31	18	0	42.88	0.34	20	20	7.1	4.82	12.69	.8409903	23	14.3	120	14	24.0	6	41	34.7	.5092159	
32	17	56	32.75	0.34	S. 20	15	46.4	4.74	12.49	9.8479527	23	6.9	125	57	20.9	N. 6	51	51.9	9.5148821	

Mean Noon.	Apparent Right Ascension.	Apparent Declination.	Log. of True Dist. from the Earth.	Merid. Passage.	Mean Noon.	Apparent Right Ascension.	Apparent Declination.	Log. of True Dist. from the Earth.	Merid. Passage.
	h m s	° ' "		h m		h m s	° ' "		h m
Jan. 1	20 42 8.53	S. 20 1 33.7	0.1560232	2 2.8	Feb. 16	0 15 34.83	N. 1 4 46.3	0.0734002	2 34.8
2	20 47 14.16	19 42 17.7	.1546159	2 3.9	17	0 19 54.19	1 36 17.5	.0711200	2 35.1
3	20 52 18.44	19 22 28.3	.1531938	2 5.0	18	0 24 13.27	2 7 46.9	.0688152	2 35.5
4	20 57 21.34	19 2 6.2	.1517568	2 6.1	19	0 28 32.12	2 39 13.8	.0664855	2 35.9
5	21 2 22.87	18 41 12.1	.1503046	2 7.2	20	0 32 50.76	3 10 37.4	.0641306	2 36.3
6	21 7 23.00	18 19 46.8	.1488370	2 8.3	21	0 37 9.23	3 41 57.1	.0617505	2 36.6
7	21 12 21.73	17 57 51.1	.1473539	2 9.3	22	0 41 27.58	4 13 12.2	.0593449	2 37.0
8	21 17 19.07	17 35 25.8	.1458550	2 10.3	23	0 45 45.82	4 44 21.9	.0569133	2 37.4
9	21 22 15.00	17 12 31.6	.1443402	2 11.3	24	0 50 4.01	5 15 25.6	.0544555	2 37.7
10	21 27 9.54	16 49 9.3	.1428094	2 12.3	25	0 54 22.18	5 46 22.6	.0519713	2 38.1
11	21 32 2.69	16 25 19.7	.1412623	2 13.2	26	0 58 40.35	6 17 12.3	.0494601	2 38.4
12	21 36 54.45	16 1 3.6	.1396989	2 14.1	27	1 2 58.57	6 47 53.9	.0469216	2 38.8
13	21 41 44.83	15 36 21.9	.1381190	2 15.0	28	1 7 16.87	7 18 26.8	.0443554	2 39.2
14	21 46 33.85	15 11 15.3	.1365225	2 15.9	29	1 11 35.28	7 48 50.3	.0417609	2 39.5
15	21 51 21.51	14 45 44.5	.1349094	2 16.7	Mar. 1	1 15 53.83	8 19 3.6	.0391377	2 39.9
16	21 56 7.84	14 19 50.5	.1332795	2 17.6	2	1 20 12.55	8 49 6.2	.0364852	2 40.3
17	22 0 52.84	13 53 34.0	.1316327	2 18.4	3	1 24 31.46	9 18 57.2	.0338030	2 40.6
18	22 5 36.55	13 26 55.7	.1299689	2 19.2	4	1 28 50.59	9 48 36.1	.0310905	2 41.0
19	22 10 18.98	12 59 56.6	.1282880	2 19.9	5	1 33 9.96	10 18 2.2	.0283473	2 41.4
20	22 15 0.16	12 32 37.3	.1265898	2 20.7	6	1 37 29.58	10 47 14.8	.0255729	2 41.8
21	22 19 40.11	12 4 58.7	.1248743	2 21.4	7	1 41 49.48	11 16 13.1	.0227667	2 42.2
22	22 24 18.86	11 37 1.5	.1231412	2 22.1	8	1 46 9.67	11 44 56.5	.0199282	2 42.6
23	22 28 56.44	11 8 46.7	.1213905	2 22.8	9	1 50 30.17	12 13 24.3	.0170571	2 43.0
24	22 33 32.88	10 40 14.9	.1196220	2 23.4	10	1 54 50.99	12 41 35.8	.0141529	2 43.4
25	22 38 8.21	10 11 26.8	.1178356	2 24.1	11	1 59 12.15	13 9 30.3	.0112151	2 43.8
26	22 42 42.46	9 42 23.4	.1160310	2 24.7	12	2 3 33.66	13 37 7.2	.0082433	2 44.2
27	22 47 15.67	9 13 5.3	.1142079	2 25.3	13	2 7 55.52	14 4 25.8	.0052372	2 44.6
28	22 51 47.88	8 43 33.3	.1123662	2 25.9	14	2 12 17.74	14 31 25.3	0.0021962	2 45.0
29	22 56 19.11	8 13 48.1	.1105055	2 26.5	15	2 16 40.33	14 58 5.2	9.9991200	2 45.5
30	23 0 49.41	7 43 50.6	.1086255	2 27.0	16	2 21 3.29	15 24 24.4	.9960082	2 45.9
Feb. 1	23 5 18.81	7 13 41.4	.1067259	2 27.6	17	2 25 26.62	15 50 23.4	.9928604	2 46.3
2	23 9 47.35	6 43 21.4	.1048064	2 28.1	18	2 29 50.33	16 16 0.4	.9896764	2 46.8
3	23 14 15.05	6 12 51.2	.1028666	2 28.6	19	2 34 14.42	16 41 15.2	.9864556	2 47.3
4	23 18 41.96	5 42 11.8	.1009061	2 29.1	20	2 38 38.88	17 6 7.1	.9831977	2 47.7
5	23 23 8.10	5 11 23.8	.0989246	2 29.6	21	2 43 3.71	17 30 35.5	.9799024	2 48.2
6	23 27 33.52	4 40 28.0	.0969216	2 30.1	22	2 47 28.91	17 54 39.8	.9765693	2 48.7
7	23 31 58.24	4 9 25.1	.0948970	2 30.6	23	2 51 54.47	18 18 19.5	.9731978	2 49.2
8	23 36 22.30	3 38 16.0	.0928504	2 31.1	24	2 56 20.38	18 41 34.0	.9697877	2 49.7
9	23 40 45.74	3 7 1.3	.0907816	2 31.5	25	3 0 46.64	19 4 22.7	.9663383	2 50.2
10	23 45 8.58	2 35 41.8	.0886903	2 31.9	26	3 5 13.23	19 26 45.0	.9628491	2 50.7
11	23 49 30.87	2 4 18.3	.0865762	2 32.4	27	3 9 40.14	19 48 40.4	.9593195	2 51.2
12	23 53 52.63	1 32 51.4	.0844391	2 32.8	28	3 14 7.35	20 10 8.4	.9557489	2 51.7
13	23 58 13.91	1 1 22.1	.0822788	2 33.2	29	3 18 34.84	20 31 8.5	.9521366	2 52.2
14	0 2 34.73	S. 0 29 50.9	.0800950	2 33.6	30	3 23 2.58	20 51 40.2	.9484819	2 52.7
15	0 6 55.13	N. 0 14 1.4	.0778874	2 34.0	31	3 27 30.54	21 11 42.9	.9447841	2 53.2
16	0 11 15.16	0 33 14.1	.0756559	2 34.4	Apr. 1	3 31 58.69	21 31 16.3	.9410424	2 53.8
	0 15 34.83	N. 1 4 46.3	0.0734002	2 34.8	2	3 36 26.99	N. 21 50 19.8	9.9372560	2 54.3

	H. P.	S. D.		H. P.	S. D.
Jan. 1	6.14	5.87	Jan. 25	6.71	6.41
5	6.22	5.94	29	6.82	6.52
9	6.31	6.03	Feb. 2	6.94	6.63
13	6.40	6.12	6	7.07	6.76
17	6.50	6.21	10	7.21	6.89
21	6.60	6.31	14	7.35	7.03

	H. P.	S. D.		H. P.	S. D.
Feb. 18	7.51	7.18	Mar. 13	8.69	8.31
22	7.68	7.34	17	8.95	8.55
26	7.85	7.50	21	9.22	8.81
Mar. 1	8.04	7.68	25	9.51	9.09
5	8.24	7.87	29	9.83	9.39
9	8.46	8.08	Apr. 2	10.17	9.72

Mean Noon.	Apparent Right Ascension.	Apparent Declination.	Log. of True Dist. from the Earth.	Merid. Passage.	Mean Noon.	Apparent Right Ascension.	Apparent Declination.	Log. of True Dist. from the Earth.	Merid. Passage.							
	h m s	° ' "		h m		h m s	° ' "		h m							
Apr. 2	3 36 26.99	N. 21 50 19.8	9.9372560	2 54.3	May 18	6 41 51.72	N. 26 38 24.5	9.7038476	2 58.2							
	3 40 55.39	22 8 53.0	.9334242	2 54.8		19	6 44 42.21	26 33 2.2	.6973108	2 57.0						
	4 34 52.86	22 26 55.5	.9295464	2 55.4		20	6 47 27.05	26 27 18.7	.6907159	2 55.8						
	5 34 9 52.34	22 44 26.8	.9256218	2 55.9		21	6 50 6.05	26 21 14.9	.6840650	2 54.5						
	6 3 54 20.77	23 1 26.6	.9216496	2 56.4		22	6 52 38.99	26 14 51.7	.6773603	2 53.1						
	7 3 58 49.10	23 17 54.3	.9176292	2 57.0		23	6 55 5.68	26 8 9.9	.6706044	2 51.6						
	8 4 3 17.27	23 33 49.8	.9135599	2 57.5		24	6 57 25.89	26 1 10.3	.6638001	2 50.0						
	9 4 7 45.21	23 49 12.6	.9094410	2 58.0		25	6 59 39.42	25 53 53.6	.6569506	2 48.3						
	10 4 12 12.86	24 4 2.4	.9052718	2 58.5		26	7 1 46.04	25 46 20.7	.6500591	2 46.4						
	11 4 16 40.14	24 18 19.0	.9010517	2 59.0		27	7 3 45.52	25 38 32.7	.6431298	2 44.5						
	12 4 21 6.98	24 32 2.0	.8967801	2 59.5		28	7 5 37.63	25 30 30.2	.6361669	2 42.4						
	13 4 25 33.30	24 45 11.3	.8924562	3 0.0		29	7 7 22.11	25 22 14.0	.6291754	2 40.2						
	14 4 29 59.01	24 57 46.6	.8880795	3 0.5		30	7 8 58.73	25 13 44.8	.6221608	2 37.8						
	15 4 34 24.04	25 9 47.8	.8836495	3 1.0		31	7 10 27.25	25 5 3.6	.6151293	2 35.3						
	16 4 38 48.29	25 21 14.6	.8791657	3 1.5		June 1	7 11 47.41	24 56 11.0	.6080877	2 32.7						
	17 4 43 11.67	25 32 7.0	.8746274	3 1.9			2	7 12 58.97	24 47 7.9	.6010438	2 30.0					
	18 4 47 34.10	25 42 24.8	.8700342	3 2.3			3	7 14 1.67	24 37 54.9	.5940060	2 27.1					
	19 4 51 55.47	25 52 8.0	.8653857	3 2.7			4	7 14 55.28	24 28 32.8	.5869836	2 24.0					
	20 4 56 15.70	26 1 16.5	.8606813	3 3.1			5	7 15 39.57	24 19 2.1	.5799869	2 20.8					
	21 5 0 34.69	26 9 50.4	.8559207	3 3.5			6	7 16 14.31	24 9 23.4	.5730272	2 17.4					
	22 5 4 52.33	26 17 49.8	.8511032	3 3.9			7	7 16 39.27	23 59 37.1	.5661168	2 13.9					
	23 5 9 8.54	26 25 14.6	.8462281	3 4.2			8	7 16 54.27	23 49 43.9	.5592689	2 10.2					
	24 5 13 23.20	26 32 5.0	.8412948	3 4.5			9	7 16 59.11	23 39 44.2	.5524982	2 6.3					
	25 5 17 36.22	26 38 21.2	.8363027	3 4.8			10	7 16 53.65	23 29 38.4	.5458203	2 2.3					
	26 5 21 47.47	26 44 3.4	.8312510	3 5.0			11	7 16 37.75	23 19 26.8	.5392520	1 58.1					
	27 5 25 56.85	26 49 11.7	.8261389	3 5.2			12	7 16 11.33	23 9 10.0	.5328111	1 53.7					
	28 5 30 4.23	26 53 46.3	.8209656	3 5.4			13	7 15 34.35	22 58 48.0	.5265170	1 49.1					
	29 5 34 9.50	26 57 47.6	.8157304	3 5.5			14	7 14 46.80	22 48 21.0	.5203902	1 44.4					
	30 5 38 12.52	27 1 15.9	.8104326	3 5.6			15	7 13 48.74	22 37 49.2	.5144515	1 39.5					
	May 1	5 42 13.16	27 4 11.5	.8050714			3 5.7	16	7 12 40.29	22 27 13.0	.5087222	1 34.4				
2 5 46 11.28		27 6 34.7	.7996461	3 5.7	17		7 11 21.65	22 16 32.5	.5032252	1 29.2						
3 5 50 6.75		27 8 26.0	.7941562	3 5.7	18		7 9 53.07	22 5 48.0	.4979830	1 23.8						
4 5 53 59.43		27 9 45.8	.7886009	3 5.6	19	7 8 14.87	21 54 59.8	.4930184	1 18.2							
5 5 57 49.16		27 10 34.5	.7829797	3 5.5	20	7 6 27.47	21 44 8.2	.4883540	1 12.5							
6 6 1 35.78		27 10 52.8	.7772922	3 5.3	21	7 4 31.34	21 33 13.6	.4840118	1 6.6							
7 6 5 19.14		27 10 41.0	.7715380	3 5.1	22	7 2 27.05	21 22 16.7	.4800131	1 0.6							
8 6 8 59.08		27 9 59.8	.7657167	3 4.8	23	7 0 15.20	21 11 18.1	.4763788	0 54.5							
9 6 12 35.43		27 8 49.6	.7598282	3 4.5	24	6 57 56.48	21 0 18.7	.4731281	0 48.3							
10 6 16 8.02		27 7 11.1	.7538724	3 4.0	25	6 55 31.66	20 49 19.5	.4702786	0 41.9							
11 6 19 36.68		27 5 4.9	.7478494	3 3.6	26	6 53 1.57	20 38 21.6	.4678456	0 35.5							
12 6 23 1.23		27 2 31.7	.7417595	3 3.0	27	6 50 27.09	20 27 26.5	.4658437	0 29.0							
13 6 26 21.48		26 59 32.2	.7356028	3 2.4	28	6 47 49.13	20 16 35.6	.4642846	0 22.5							
14 6 29 37.25		26 56 7.0	.7293801	3 1.7	29	6 45 8.67	20 5 50.5	.4631772	0 15.9							
15 6 32 48.36		26 52 16.9	.7230921	3 1.0	30	6 42 26.68	19 55 13.1	.4625275	0 9.3							
16 6 35 54.60		26 48 2.7	.7167398	3 0.1	July 1	6 39 44.18	19 44 45.3	.4623390	{ 23 51 }							
17 6 38 55.79		26 43 24.9	.7103245	2 59.2		2	6 37 2.16	19 34 29.2	.4626122	23 49.5						
18 6 41 51.72		N. 26 38 24.5	9.7038476	2 58.2		3	6 34 21.62	N. 19 24 27.0	9.4633448	23 42.9						
	H. P.	S. D.		H. P.	S. D.		H. P.	S. D.								
Apr. 2	10.17	9.72	Apr. 26	12.98	12.40	May 20	17.94	17.15	June 13	26.18	25.02					
	10.54	10.07		30	13.62		13.02	24		19.08	18.23	17	27.62	26.40		
	10.94	10.45		May 4	14.32		13.69	28		20.34	19.44	21	28.87	27.59		
	11.39	10.88			8		15.09	14.42		June 1	21.70	20.74	25	29.80	28.48	
	11.87	11.34			12		15.95	15.24			5	23.15	22.12	29	30.29	28.95
	12.40	11.85			16		16.89	16.14			9	24.66	23.57	July 3	30.28	28.94

		H. P.	S. D.			H. P.	S. D.			H. P.	S. D.			H. P.	S. D.			
Apr. 2	10 ¹⁷	9 ⁷²	Apr. 26	12 ⁹⁸	12 ⁴⁰	May 20	17 ⁹⁴	17 ¹⁵	June 13	26 ¹⁸	25 ⁰²	June 17	27 ⁶²	26 ⁴⁰	June 21	28 ³⁷	27 ⁵⁹	
	6	10 ⁵⁴		10 ⁰⁷	30		13 ⁶²	13 ⁰²		24	19 ⁰⁸		18 ²³	17		27 ⁶²	26 ⁴⁰	28 ⁸⁷	27^{59}
	10	10 ⁹⁴	10 ⁴⁵	May 4	14 ³²	13 ⁶⁹	28	20 ³⁴	19 ⁴⁴	21	28 ³⁷		27 ⁵⁹	29		30 ²⁸	28 ⁴⁸	
	14	11 ³⁹	10 ⁸⁸		8	15 ⁰⁹	14 ⁴²	June 1	21 ⁷⁰	20 ⁷⁴	25		29 ⁸⁰	28 ⁴⁸		29	30 ²⁸	28 ⁴⁸
	18	11 ⁸⁷	11 ³⁴		12	15 ⁹⁵	15 ²⁴		5	23 ¹⁵	22 ¹²		29	30 ²⁸		28 ⁴⁸	29	30 ²⁸	28^{48}
	22	12 ⁴⁰	11 ⁸⁵		16	16 ⁸⁹	16 ¹⁴	9	24 ⁶⁶	23 ⁵⁷	July 3		30 ²⁸	28 ⁴⁸		29	30 ²⁸	28 ⁴⁸

Mean Noon.	Apparent Right Ascension.	Apparent Declination.	Log. of True Dist. from the Earth.	Merid. Passage	Mean Noon.	Apparent Right Ascension.	Apparent Declination.	Log. of True Dist. from the Earth.	Merid. Passage
	h m s	° ' "		h m		h m s	° ' "		h m
July 3	6 34 21.62	N. 19 24 27.0	9.4633448	23 42.9	Aug. 18	6 49 35.51	N. 18 21 9.9	9.7250074	21 2.5
4	6 31 43.54	19 14 40.7	.4645312	23 36.4	19	6 52 38.39	18 22 32.6	.7310814	21 1.7
5	6 29 8.85	19 5 12.4	.4661638	23 30.0	20	6 55 45.37	18 23 41.0	.7370926	21 0.9
6	6 26 38.46	18 56 4.5	.4682316	23 23.7	21	6 58 56.29	18 24 33.9	.7430406	21 0.2
7	6 24 13.21	18 47 18.8	.4707217	23 17.4	22	7 2 11.00	18 25 10.4	.7489250	20 59.6
8	6 21 53.89	18 38 57.2	.4736188	23 11.3	23	7 5 29.34	18 25 29.3	.7547458	20 59.0
9	6 19 41.23	18 31 1.5	.4769063	23 5.3	24	7 8 51.18	18 25 29.9	.7605030	20 58.5
10	6 17 35.90	18 23 33.2	.4805657	22 59.4	25	7 12 16.36	18 25 11.4	.7661964	20 58.0
11	6 15 38.47	18 16 33.6	.4845771	22 53.7	26	7 15 44.74	18 24 32.9	.7718264	20 57.6
12	6 13 49.45	18 10 4.0	.4889197	22 48.1	27	7 19 16.20	18 23 33.7	.7773932	20 57.2
13	6 12 9.30	18 4 5.3	.4935717	22 42.6	28	7 22 50.59	18 22 13.1	.7828972	20 56.9
14	6 10 38.40	17 58 37.9	.4985109	22 37.3	29	7 26 27.80	18 20 30.3	.7883390	20 56.6
15	6 9 17.05	17 53 42.3	.5037151	22 32.2	30	7 30 7.69	18 18 24.7	.7937189	20 56.3
16	6 8 5.46	17 49 18.8	.5091618	22 27.3	31	7 33 50.15	18 15 55.7	.7990377	20 56.1
17	6 7 3.83	17 45 27.1	.5148289	22 22.5	Sept. 1	7 37 35.05	18 13 2.8	.8042960	20 56.0
18	6 6 12.26	17 42 6.9	.5206947	22 17.8	2	7 41 22.30	18 9 45.4	.8094945	20 55.9
19	6 5 30.82	17 39 17.8	.5267378	22 13.4	3	7 45 11.77	18 6 3.0	.8146341	20 55.8
20	6 4 59.49	17 36 58.9	.5329377	22 9.1	4	7 49 3.37	18 1 55.2	.8197156	20 55.7
21	6 4 38.22	17 35 9.4	.5392749	22 4.9	5	7 52 57.01	17 57 21.5	.8247398	20 55.7
22	6 4 26.90	17 33 48.1	.5457310	22 1.0	6	7 56 52.58	17 52 21.6	.8297075	20 55.7
23	6 4 25.42	17 32 53.8	.5522889	21 57.2	7	8 0 50.00	17 46 55.1	.8346194	20 55.7
24	6 4 33.62	17 32 25.2	.5589323	21 53.5	8	8 4 49.18	17 41 1.6	.8394766	20 55.8
25	6 4 51.32	17 32 20.9	.5656463	21 50.0	9	8 8 50.03	17 34 40.9	.8442795	20 55.9
26	6 5 18.31	17 32 39.2	.5724166	21 46.7	10	8 12 52.48	17 27 52.7	.8490288	20 56.0
27	6 5 54.38	17 33 18.5	.5792307	21 43.5	11	8 16 56.45	17 20 36.7	.8537252	20 56.2
28	6 6 39.31	17 34 17.3	.5860771	21 40.4	12	8 21 1.87	17 12 52.8	.8583693	20 56.3
29	6 7 32.87	17 35 33.9	.5929447	21 37.5	13	8 25 8.66	17 4 40.8	.8629615	20 56.5
30	6 8 34.80	17 37 6.6	.5998237	21 34.7	14	8 29 16.74	16 56 0.6	.8675024	20 56.7
31	6 9 44.86	17 38 53.6	.6067053	21 32.0	15	8 33 26.04	16 46 52.0	.8719924	20 56.9
Aug. 1	6 11 2.80	17 40 53.3	.6135817	21 29.5	16	8 37 36.49	16 37 14.9	.8764320	20 57.2
2	6 12 28.38	17 43 3.9	.6204457	21 27.1	17	8 41 48.02	16 27 9.4	.8808217	20 57.5
3	6 14 1.35	17 45 23.8	.6272908	21 24.9	18	8 46 0.56	16 16 35.5	.8851622	20 57.8
4	6 15 41.48	17 47 51.3	.6341115	21 22.7	19	8 50 14.04	16 5 33.1	.8894538	20 58.1
5	6 17 28.54	17 50 24.9	.6409027	21 20.6	20	8 54 28.40	15 54 2.3	.8936972	20 58.4
6	6 19 22.30	17 53 2.4	.6476600	21 18.7	21	8 58 43.58	15 42 3.3	.8978928	20 58.7
7	6 21 22.52	17 55 42.8	.6543793	21 16.8	22	9 2 59.51	15 29 36.0	.9020412	20 59.0
8	6 23 29.00	17 58 24.4	.6610571	21 15.1	23	9 7 16.14	15 16 40.7	.9061431	20 59.3
9	6 25 41.54	18 1 5.7	.6676901	21 13.4	24	9 11 33.41	15 3 17.5	.9101990	20 59.7
10	6 27 59.94	18 3 45.2	.6742758	21 11.9	25	9 15 51.27	14 49 26.6	.9142094	21 0.1
11	6 30 23.98	18 6 21.3	.6808118	21 10.4	26	9 20 9.65	14 35 8.3	.9181750	21 0.4
12	6 32 53.50	18 8 52.8	.6872958	21 9.1	27	9 24 28.52	14 20 22.7	.9220964	21 0.8
13	6 35 28.31	18 11 18.2	.6937258	21 7.8	28	9 28 47.82	14 5 10.3	.9259742	21 1.2
14	6 38 8.23	18 13 36.3	.7000998	21 6.6	29	9 33 7.51	13 49 31.2	.9298090	21 1.6
15	6 40 53.07	18 15 45.8	.7064163	21 5.5	30	9 37 27.56	13 33 25.7	.9336017	21 2.0
16	6 43 42.67	18 17 45.4	.7126739	21 4.4	Oct. 1	9 41 47.91	13 16 54.3	.9373528	21 2.4
17	6 46 36.88	18 19 33.8	.7188713	21 3.4	2	9 46 8.54	12 59 57.2	.9410631	21 2.8
18	6 49 35.51	N. 18 21 9.9	9.7250074	21 2.5	3	9 50 29.42	N. 12 42 34.8	9.9447334	21 3.2

	H. P.	S. D.		H. P.	S. D.		H. P.	S. D.		H. P.	S. D.
July 3	30.28	28.94	July 27	23.19	22.16	Aug. 20	16.12	15.41	Sept. 13	12.06	11.53
7	29.77	28.45	31	21.77	20.81	24	15.27	14.59	17	11.58	11.07
11	28.83	27.55	Aug. 4	20.43	19.52	28	14.51	13.87	21	11.13	10.64
15	27.59	26.37	8	19.21	18.36	Sept. 1	13.81	13.20	25	10.72	10.25
19	26.17	25.01	12	18.08	17.28	5	13.17	12.59	29	10.34	9.88
23	24.64	23.55	16	17.05	16.29	9	12.60	12.04	Oct. 3	9.99	9.55

Mean Noon.	Apparent Right Ascension.	Apparent Declination.	Log. of True Dist. from the Earth.	Merid. Passage	Mean Noon.	Apparent Right Ascension.	Apparent Declination.	Log. of True Dist. from the Earth.	Merid. Passage.
h m s	° ' "	h m	h m	h m	h m s	° ' "	h m	h m	h m
Oct. 3	9 50 29.42	N. 12 42 34.8	9.9447334	21 3.2	Nov. 18	13 13 11.02	S. 5 43 16.5	0.0778611	21 24.7
4	9 54 50.51	12 24 47.6	.9483642	21 3.6	19	13 17 42.98	6 10 1.2	.0801100	21 25.3
5	9 59 11.79	12 6 35.8	.9519563	21 4.0	20	13 22 15.63	6 36 41.5	.0823357	21 25.9
6	10 3 33.25	11 48 0.0	.9555103	21 4.5	21	13 26 49.00	7 3 16.7	.0845383	21 26.6
7	10 7 54.87	11 29 0.4	.9590268	21 4.9	22	13 31 23.12	7 29 45.8	.0867179	21 27.2
8	10 12 16.62	11 9 37.5	.9625063	21 5.3	23	13 35 58.01	7 56 8.2	.0888747	21 27.8
9	10 16 38.50	10 49 51.8	.9659494	21 5.7	24	13 40 33.69	8 22 23.1	.0910089	21 28.5
10	10 21 0.50	10 29 43.7	.9693565	21 6.1	25	13 45 10.20	8 48 29.7	.0931208	21 29.2
11	10 25 22.60	10 9 13.6	.9727280	21 6.6	26	13 49 47.54	9 14 27.1	.0952106	21 29.9
12	10 29 44.80	9 48 22.1	.9760642	21 7.0	27	13 54 25.75	9 40 14.6	.0972785	21 30.6
13	10 34 7.09	9 27 9.7	.9793656	21 7.4	28	13 59 4.84	10 5 51.4	.0993248	21 31.3
14	10 38 29.47	9 5 36.9	.9826325	21 7.9	29	14 3 44.84	10 31 16.6	.1013499	21 32.0
15	10 42 51.92	8 43 44.2	.9858651	21 8.3	30	14 8 25.78	10 56 29.5	.1033539	21 32.8
16	10 47 14.45	8 21 32.1	.9890639	21 8.7	Dec. 1	14 13 7.68	11 21 29.2	.1053374	21 33.6
17	10 51 37.05	7 59 1.3	.9922292	21 9.2	2	14 17 50.56	11 46 15.0	.1073005	21 34.4
18	10 55 59.72	7 36 12.2	.9953612	21 9.6	3	14 22 34.44	12 10 46.1	.1092436	21 35.2
19	11 0 22.46	7 13 5.5	.9984602	21 10.0	4	14 27 19.35	12 35 1.6	.1111669	21 36.0
20	11 4 45.28	6 49 41.8	.00015266	21 10.5	5	14 32 5.31	12 59 0.9	.1130709	21 36.8
21	11 9 8.17	6 26 1.5	.0045607	21 10.9	6	14 36 52.33	13 22 43.0	.1149555	21 37.7
22	11 13 31.14	6 2 5.4	.0075628	21 11.3	7	14 41 40.45	13 46 7.3	.1168212	21 38.5
23	11 17 54.20	5 37 54.2	.0105332	21 11.8	8	14 46 29.68	14 9 12.9	.1186679	21 39.4
24	11 22 17.35	5 13 28.3	.0134723	21 12.3	9	14 51 20.04	14 31 59.0	.1204959	21 40.4
25	11 26 40.60	4 48 48.6	.0163802	21 12.7	10	14 56 11.54	14 54 24.9	.1223054	21 41.3
26	11 31 3.95	4 23 55.6	.0192574	21 13.1	11	15 1 4.20	15 16 29.8	.1240964	21 42.3
27	11 35 27.41	3 58 49.9	.0221044	21 13.6	12	15 5 58.03	15 38 12.8	.1258691	21 43.2
28	11 39 51.00	3 33 32.3	.0249213	21 14.1	13	15 10 53.04	15 59 33.2	.1276238	21 44.2
29	11 44 14.72	3 8 3.5	.0277088	21 14.5	14	15 15 49.24	16 20 30.3	.1293604	21 45.2
30	11 48 38.59	2 42 24.1	.0304672	21 14.9	15	15 20 46.64	16 41 3.1	.1310790	21 46.3
31	11 53 2.63	2 16 34.8	.0331970	21 15.4	16	15 25 45.23	17 1 11.0	.1327798	21 47.3
Nov. 1	11 57 26.86	1 50 36.3	.0358987	21 15.9	17	15 30 45.03	17 20 53.2	.1344629	21 48.4
2	12 1 51.29	1 24 29.4	.0385726	21 16.3	18	15 35 46.02	17 40 9.0	.1361283	21 49.5
3	12 6 15.95	0 58 14.6	.0412193	21 16.8	19	15 40 48.22	17 58 57.4	.1377761	21 50.6
4	12 10 40.86	0 31 52.6	.0438392	21 17.3	20	15 45 51.60	18 17 17.9	.1394064	21 51.7
5	12 15 6.04	N. 0 5 24.1	.0464326	21 17.8	21	15 50 56.17	18 35 9.6	.1410193	21 52.9
6	12 19 31.52	S. 0 21 10.2	.0489998	21 18.3	22	15 56 1.92	18 52 31.9	.1426148	21 54.0
7	12 23 57.33	0 47 49.6	.0515412	21 18.8	23	16 1 8.82	19 9 23.9	.1441931	21 55.2
8	12 28 23.50	1 14 33.4	.0540571	21 19.3	24	16 6 16.87	19 25 44.9	.1457543	21 56.5
9	12 32 50.06	1 41 20.8	.0565477	21 19.8	25	16 11 26.04	19 41 34.4	.1472985	21 57.7
10	12 37 17.02	2 8 11.3	.0590134	21 20.3	26	16 16 36.31	19 56 51.5	.1488259	21 58.9
11	12 41 44.43	2 35 4.1	.0614542	21 20.8	27	16 21 47.66	20 11 35.6	.1503367	22 0.2
12	12 46 12.31	3 1 58.5	.0638705	21 21.3	28	16 27 0.05	20 25 46.0	.1518311	22 1.5
13	12 50 40.68	3 28 53.7	.0662623	21 21.9	29	16 32 13.47	20 39 22.1	.1533093	22 2.8
14	12 55 9.58	3 55 49.0	.0686299	21 22.4	30	16 37 27.87	20 52 23.2	.1547716	22 4.1
15	12 59 39.04	4 22 43.7	.0709734	21 23.0	31	16 42 43.24	21 4 48.8	.1562182	22 5.4
16	13 4 9.08	4 49 37.0	.0732930	21 23.5	32	16 47 59.54	S. 21 16 38.3	.01576493	22 6.7
17	13 8 39.73	5 16 28.2	.0755888	21 24.1					
18	13 13 11.02	S. 5 43 16.5	0.0778611	21 24.7					

	H. P.	S. D.		H. P.	S. D.		H. P.	S. D.		H. P.	S. D.
Oct. 3	9.99	9.55	Oct. 27	8.36	7.99	Nov. 20	7.28	6.96	Dec. 14	6.53	6.24
7	9.67	9.24	31	8.15	7.79	24	7.13	6.81	18	6.43	6.14
11	9.37	8.96	Nov. 4	7.95	7.60	28	7.00	6.69	22	6.34	6.06
15	9.09	8.69	8	7.77	7.43	Dec. 2	6.87	6.57	26	6.25	5.97
19	8.83	8.44	12	7.60	7.26	6	6.75	6.45	30	6.16	5.89
23	8.59	8.21	16	7.43	7.10	10	6.64	6.35	34	6.08	5.81

Mean Noon.	Apparent Right Ascension.	Apparent Declination.	Log. of True Dist. from the Earth.	Merid. Passage.	Mean Noon.	Apparent Right Ascension.	Apparent Declination.	Log. of True Dist. from the Earth.	Merid. Passage.
	h m s	° ' "		h m		h m s	° ' "		h m
Jan. 1	15 3 57.85	S. 16 34 39.9	0.3081002	20 23.3	Feb. 16	17 6 48.25	S. 22 39 29.5	0.2108773	19 25.0
2	15 6 32.14	16 45 43.4	.3063210	20 21.9	17	17 9 33.15	22 43 45.3	.2084096	19 23.8
3	15 9 6.74	16 56 39.7	.3045269	20 20.6	18	17 12 18.16	22 47 50.9	.2059266	19 22.6
4	15 11 41.63	17 7 28.9	.3027178	20 19.2	19	17 15 3.27	22 51 46.5	.2034286	19 21.4
5	15 14 16.81	17 18 10.7	.3008938	20 17.9	20	17 17 48.48	22 55 31.8	.2009154	19 20.2
6	15 16 52.28	17 28 45.1	.2990550	20 16.5	21	17 20 33.76	22 59 7.1	.1983868	19 19.0
7	15 19 28.04	17 39 12.0	.2972012	20 15.2	22	17 23 19.13	23 2 32.1	.1958430	19 17.9
8	15 22 4.09	17 49 31.3	.2953327	20 13.8	23	17 26 4.58	23 5 47.0	.1932836	19 16.7
9	15 24 40.41	17 59 42.8	.2934495	20 12.5	24	17 28 50.08	23 8 51.6	.1907085	19 15.5
10	15 27 17.02	18 9 46.6	.2915516	20 11.2	25	17 31 35.65	23 11 46.1	.1881178	19 14.3
11	15 29 53.90	18 19 42.4	.2896390	20 9.8	26	17 34 21.25	23 14 30.4	.1855112	19 13.1
12	15 32 31.07	18 29 30.3	.2877719	20 8.5	27	17 37 6.88	23 17 4.5	.1828885	19 11.9
13	15 35 8.52	18 39 10.1	.2857702	20 7.2	28	17 39 52.52	23 19 28.5	.1802500	19 10.8
14	15 37 46.24	18 48 41.9	.2838140	20 5.9	29	17 42 38.17	23 21 42.1	.1775953	19 9.6
15	15 40 24.24	18 58 5.4	.2818432	20 4.6	Mar. 1	17 45 23.81	23 23 45.7	.1749245	19 8.4
16	15 43 2.51	19 7 20.6	.2798580	20 3.3	2	17 48 9.44	23 25 39.0	.1722377	19 7.2
17	15 45 41.06	19 16 27.5	.2778584	20 2.0	3	17 50 55.02	23 27 22.2	.1695348	19 6.0
18	15 48 19.90	19 25 25.9	.2758441	20 0.7	4	17 53 40.56	23 28 55.2	.1668158	19 4.9
19	15 50 59.00	19 34 15.8	.2738152	19 59.4	5	17 56 26.04	23 30 18.1	.1640810	19 3.7
20	15 53 38.39	19 42 57.2	.2717717	19 58.2	6	17 59 11.45	23 31 30.8	.1613303	19 2.5
21	15 56 18.05	19 51 29.9	.2697136	19 56.9	7	18 1 56.78	23 32 33.5	.1585637	19 1.3
22	15 58 57.97	19 59 53.9	.2676406	19 55.6	8	18 4 42.02	23 33 26.1	.1557814	19 0.1
23	16 1 38.16	20 8 9.1	.2655529	19 54.3	9	18 7 27.16	23 34 8.7	.1529834	18 58.9
24	16 4 18.62	20 16 15.5	.2634506	19 53.1	10	18 10 12.18	23 34 41.2	.1501697	18 57.7
25	16 6 59.34	20 24 12.9	.2613332	19 51.8	11	18 12 57.09	23 35 3.7	.1473406	18 56.5
26	16 9 40.32	20 32 1.3	.2592008	19 50.5	12	18 15 41.87	23 35 16.4	.1444960	18 55.3
27	16 12 21.55	20 39 40.6	.2570530	19 49.3	13	18 18 26.52	23 35 19.1	.1416358	18 54.1
28	16 15 3.04	20 47 10.9	.2548901	19 48.1	14	18 21 11.02	23 35 12.0	.1387602	18 52.9
29	16 17 44.76	20 54 31.9	.2527118	19 46.8	15	18 23 55.37	23 34 55.1	.1358691	18 51.7
30	16 20 26.72	21 1 43.7	.2505180	19 45.6	16	18 26 39.56	23 34 28.5	.1329625	18 50.5
31	16 23 8.91	21 8 46.1	.2483088	19 44.4	17	18 29 23.59	23 33 52.2	.1300403	18 49.3
Feb. 1	16 25 51.31	21 15 39.2	.2460840	19 43.1	18	18 32 7.44	23 33 6.2	.1271026	18 48.1
2	16 28 33.92	21 22 22.8	.2438438	19 41.9	19	18 34 51.12	23 32 10.8	.1241492	18 46.9
3	16 31 16.73	21 28 56.9	.2415881	19 40.7	20	18 37 34.61	23 31 5.7	.1211801	18 45.7
4	16 33 59.74	21 35 21.4	.2393169	19 39.5	21	18 40 17.91	23 29 51.2	.1181951	18 44.4
5	16 36 42.92	21 41 36.2	.2370303	19 38.2	22	18 43 1.00	23 28 27.4	.1151942	18 43.2
6	16 39 26.29	21 47 41.3	.2347284	19 37.0	23	18 45 43.88	23 26 54.3	.1121769	18 42.0
7	16 42 9.82	21 53 36.7	.2324113	19 35.8	24	18 48 26.53	23 25 12.0	.1091434	18 40.7
8	16 44 53.51	21 59 22.3	.2300789	19 34.6	25	18 51 8.94	23 23 20.5	.1060935	18 39.5
9	16 47 37.37	22 4 58.0	.2277314	19 33.4	26	18 53 51.10	23 21 20.0	.1030269	18 38.3
10	16 50 21.37	22 10 23.9	.2253687	19 32.2	27	18 56 32.99	23 19 10.6	.0999437	18 37.0
11	16 53 5.52	22 15 39.8	.2229910	19 30.9	28	18 59 14.60	23 16 52.3	.0968437	18 35.8
12	16 55 49.81	22 20 45.8	.2205982	19 29.7	29	19 1 55.91	23 14 25.2	.0937269	18 34.5
13	16 58 34.23	22 25 41.8	.2181905	19 28.6	30	19 4 36.92	23 11 49.4	.0905933	18 33.2
14	17 1 18.79	22 30 27.8	.2157678	19 27.4	31	19 7 17.60	23 9 5.0	.0874428	18 32.0
15	17 4 3.46	22 35 3.7	.2133300	19 26.2	Apr. 1	19 9 57.94	23 6 12.2	.0842755	18 30.7
16	17 6 48.25	S. 22 39 29.5	0.2108773	19 25.0	2	19 12 37.93	S. 23 3 11.0	0.0810915	18 29.4

		Hor. Par.	Semidiameter.			Hor. Par.	Semidiameter.
January	1	4.33	2.31	February	20	5.54	2.94
	11	4.52	2.40	March	1	5.88	3.13
	21	4.73	2.52		11	6.27	3.34
	31	4.97	2.65		21	6.70	3.56
February	10	5.24	2.79		31	7.19	3.83

Mean Noon.	Apparent Right Ascension.			Apparent Declination.	Log. of True Dist. from the Earth.	Merid. Passage.	Mean Noon.	Apparent Right Ascension.			Apparent Declination.	Log. of True Dist. from the Earth.	Merid. Passage.		
	h	m	s	°	'	"		h	m	s	°	'	"		
Apr.	2	19	12 37.93	S. 23	3	11.0	0.0810915	18	29.4						
	3	19	15 17.56	23	0	1.5	.0778909	18	28.1						
	4	19	17 56.81	22	56	43.8	.0746737	18	26.8						
	5	19	20 35.67	22	53	18.2	.0714402	18	25.5						
	6	19	23 14.13	22	49	44.6	.0681902	18	24.2						
	7	19	25 52.19	22	46	3.1	.0649240	18	22.9						
	8	19	28 29.83	22	42	13.9	.0616414	18	21.6						
	9	19	31 7.04	22	38	17.2	.0583427	18	20.3						
	10	19	33 43.82	22	34	13.0	.0550277	18	19.0						
	11	19	36 20.16	22	30	1.5	.0516966	18	17.6						
	12	19	38 56.05	22	25	42.8	.0483494	18	16.3						
	13	19	41 31.48	22	21	17.0	.0449860	18	14.9						
	14	19	44 6.45	22	16	44.2	.0416065	18	13.6						
	15	19	46 40.95	22	12	4.7	.0382108	18	12.2						
	16	19	49 14.98	22	7	18.5	.0347989	18	10.8						
	17	19	51 48.52	22	2	25.7	.0313708	18	9.4						
	18	19	54 21.58	21	57	26.6	.0279263	18	8.0						
	19	19	56 54.13	21	52	21.3	.0244652	18	6.6						
	20	19	59 26.18	21	47	9.9	.0209873	18	5.2						
	21	20	1 57.71	21	41	52.5	.0174923	18	3.8						
	22	20	4 28.71	21	36	29.5	.0139800	18	2.3						
	23	20	6 59.17	21	31	0.8	.0104505	18	0.9						
	24	20	9 29.06	21	25	26.7	.0069035	17	59.4						
	25	20	11 58.39	21	19	47.4	0.0033389	17	58.0						
	26	20	14 27.12	21	14	3.1	.99997567	17	56.5						
	27	20	16 55.24	21	8	13.9	.9961568	17	55.0						
	28	20	19 22.74	21	2	20.1	.9925393	17	53.5						
	29	20	21 49.60	20	56	21.8	.9889042	17	52.0						
	30	20	24 15.79	20	50	19.2	.9852514	17	50.5						
	May	1	20	26 41.32	20	44	12.6	.9815813	17	49.0					
2		20	29 6.16	20	38	2.0	.9778938	17	47.5						
3		20	31 30.31	20	31	47.7	.9741892	17	45.9						
4		20	33 53.75	20	25	29.9	.9704674	17	44.4						
5		20	36 16.46	20	19	8.9	.9667287	17	42.8						
6		20	38 38.43	20	12	44.7	.9629730	17	41.2						
7		20	40 59.67	20	6	17.6	.9592005	17	39.6						
8		20	43 20.14	19	59	47.8	.9554114	17	38.0						
9		20	45 39.85	19	53	15.6	.9516059	17	36.4						
10		20	47 58.78	19	46	41.0	.9477838	17	34.7						
11		20	50 16.91	19	40	4.4	.9439455	17	33.1						
12		20	52 34.26	19	33	25.9	.9400909	17	31.4						
13		20	54 50.79	19	26	45.7	.9362200	17	29.8						
14		20	57 6.52	19	20	4.0	.9323329	17	28.1						
15		20	59 21.42	19	13	21.1	.9284294	17	26.4						
16		21	1 35.49	19	6	37.1	.9245095	17	24.7						
17		21	3 48.71	18	59	52.3	.9205731	17	22.9						
18		21	6 1.07	S. 18	53	7.0	9.9166199	17	21.2						
May	18	21	6 1.07	S. 18	53	7.0	9.9166199	17	21.2						
	19	21	8 12.56	18	46	21.3	.9126500	17	19.4						
	20	21	10 23.16	18	39	35.6	.9086631	17	17.6						
	21	21	12 32.84	18	32	50.1	.9046591	17	15.8						
	22	21	14 41.58	18	26	5.0	.9006379	17	14.0						
	23	21	16 49.37	18	19	20.6	.8965994	17	12.2						
	24	21	18 56.18	18	12	37.3	.8925437	17	10.4						
	25	21	21 1.97	18	5	55.1	.8884707	17	8.5						
	26	21	23 6.74	17	59	14.6	.8843808	17	6.6						
	27	21	25 10.44	17	52	35.9	.8802742	17	4.7						
	28	21	27 13.05	17	45	59.4	.8761509	17	2.8						
	29	21	29 14.56	17	39	25.4	.8720114	17	0.9						
	30	21	31 14.92	17	32	54.0	.8678559	16	59.0						
	31	21	33 14.12	17	26	25.6	.8636846	16	57.0						
	June	1	21	35 12.15	17	20	0.5	.8594982	16	55.0					
		2	21	37 8.96	17	13	39.0	.8552967	16	53.0					
		3	21	39 4.54	17	7	21.4	.8510806	16	51.0					
		4	21	40 58.87	17	1	7.7	.8468503	16	48.9					
5		21	42 51.92	16	54	58.5	.8426063	16	46.9						
6		21	44 43.68	16	48	54.0	.8383488	16	44.8						
7		21	46 34.10	16	42	54.5	.8340785	16	42.7						
8		21	48 23.18	16	37	0.3	.8297958	16	40.5						
9		21	50 10.89	16	31	11.6	.8255012	16	38.4						
10		21	51 57.20	16	25	28.8	.8211950	16	36.2						
11		21	53 42.11	16	19	52.1	.8168775	16	34.0						
12		21	55 25.59	16	14	21.8	.8125493	16	31.8						
13		21	57 7.60	16	8	58.0	.8082105	16	29.5						
14		21	58 48.12	16	3	41.3	.8038613	16	27.2						
15		22	0 27.12	15	58	31.8	.7995023	16	24.9						
16		22	2 4.59	15	53	29.9	.7951338	16	22.6						
17		22	3 40.47	15	48	35.9	.7907560	16	20.2						
18		22	5 14.71	15	43	50.1	.7863692	16	17.8						
19	22	6 47.29	15	39	13.0	.7819739	16	15.4							
20	22	8 18.19	15	34	44.7	.7775705	16	13.0							
21	22	9 47.33	15	30	25.8	.7731596	16	10.5							
22	22	11 14.67	15	26	16.5	.7687422	16	8.0							
23	22	12 40.16	15	22	17.2	.7643191	16	5.5							
24	22	14 3.74	15	18	28.3	.7598915	16	2.9							
25	22	15 25.39	15	14	50.1	.7554603	16	0.3							
26	22	16 45.04	15	11	23.0	.7510268	15	57.7							
27	22	18 2.65	15	8	7.2	.7465923	15	55.0							
28	22	19 18.18	15	5	3.0	.7421582	15	52.3							
29	22	20 31.57	15	2	10.9	.7377259	15	49.6							
30	22	21 42.79	14	59	30.9	.7332971	15	46.8							
July	1	22	22 51.78	14	57	3.6	.7288734	15	44.0						
	2	22	23 58.51	14	54	49.1	.7244564	15	41.1						
	3	22	25 2.92	S. 14	52	47.6	9.7200478	15	38.2						

		Hor. Par.	Semidiameter.			Hor. Par.	Semidiameter.	
April	10	7.75	4.12	May	30	11.93	6.35	
	20	8.38	4.46		June	9	13.15	7.00
	30	9.10	4.84			19	14.54	7.73
May	10	9.92	5.27	July	29	16.10	8.56	
	20	10.86	5.78		9	17.81	9.48	

Mean Noon.	Apparent Right Ascension.	Apparent Declination.	Log. of True Dist. from the Earth.	Merid. Passage.	Mean Noon.	Apparent Right Ascension.	Apparent Declination.	Log. of True Dist. from the Earth.	Merid. Passage.
	h m s	° ' "		h m		h m s	° ' "		h m
July	3 22 25 2.92	S. 14 52 47.6	9.7200478	15 38.2	Aug. 18	22 24 37.89	S. 17 13 47.6	9.5731671	12 35.8
	4 22 26 4.98	14 50 59.5	.7156497	15 35.3		19 22 23 38.11	17 19 18.4	.5725193	12 30.8
	5 22 27 4.65	14 49 24.8	.7112639	15 32.3		20 22 22 37.21	17 24 41.8	.5720315	12 25.9
	6 22 28 1.88	14 48 3.9	.7068922	15 29.3		21 22 21 35.37	17 29 56.6	.5717055	12 20.9
	7 22 28 56.65	14 46 56.9	.7025368	15 26.3		22 22 20 32.75	17 35 1.8	.5715425	12 15.9
	8 22 29 48.92	14 46 4.0	.6981994	15 23.2		23 22 19 29.53	17 39 56.4	.5715437	12 10.9
	9 22 30 38.64	14 45 25.4	.6938825	15 20.0		24 22 18 25.91	17 44 39.3	.5717096	12 6.0
	10 22 31 25.79	14 45 1.2	.6895881	15 16.8		25 22 17 22.08	17 49 9.5	.5720403	12 1.0
	11 22 32 10.31	14 44 51.5	.6853182	15 13.6		26 22 16 18.22	17 53 26.1	.5725357	11 56.0
	12 22 32 52.19	14 44 56.4	.6810750	15 10.4		27 22 15 14.54	17 57 28.2	.5731954	11 51.0
	13 22 33 31.37	14 45 16.1	.6768607	15 7.1		28 22 14 11.24	18 1 14.9	.5740185	11 46.0
	14 22 34 7.82	14 45 50.6	.6726778	15 3.7		29 22 13 8.50	18 4 45.5	.5750039	11 41.1
	15 22 34 41.49	14 46 40.1	.6685285	15 0.3		30 22 12 6.56	18 7 59.1	.5761498	11 36.1
	16 22 35 12.35	14 47 44.6	.6644152	14 56.9		31 22 11 5.56	18 10 55.1	.5774548	11 31.2
	17 22 35 40.34	14 49 4.2	.6603407	14 53.4	Sept. 1	22 10 5.73	18 13 32.8	.5789158	11 26.3
	18 22 36 5.43	14 50 39.0	.6563073	14 49.8		2 22 9 7.23	18 15 51.8	.5805298	11 21.4
	19 22 36 27.57	14 52 29.0	.6523184	14 46.2		3 22 8 10.25	18 17 51.5	.5822938	11 16.5
	20 22 36 46.70	14 54 34.1	.6483774	14 42.6		4 22 7 14.96	18 19 31.6	.5842041	11 11.7
	21 22 37 2.80	14 56 54.3	.6444877	14 38.9		5 22 6 21.52	18 20 51.7	.5862569	11 6.9
	22 22 37 15.83	14 59 29.5	.6406528	14 35.1		6 22 5 30.06	18 21 51.8	.5884485	11 2.1
	23 22 37 25.75	15 2 19.5	.6368766	14 31.3		7 22 4 40.73	18 22 31.5	.5907747	10 57.4
	24 22 37 32.53	15 5 24.1	.6331632	14 27.5		8 22 3 53.65	18 22 50.7	.5932314	10 52.7
	25 22 37 36.17	15 8 43.2	.6295165	14 23.6		9 22 3 8.93	18 22 49.5	.5958142	10 48.0
	26 22 37 36.64	15 12 16.3	.6259410	14 19.6		10 22 2 26.66	18 22 27.9	.5985189	10 43.4
	27 22 37 33.93	15 16 3.2	.6224410	14 15.6		11 22 1 14.94	18 21 45.9	.6013411	10 38.9
	28 22 37 28.04	15 20 3.3	.6190208	14 11.5		12 22 1 9.84	18 20 43.7	.6042760	10 34.3
	29 22 37 18.99	15 24 16.4	.6156850	14 7.4		13 22 0 35.44	18 19 21.3	.6073198	10 29.8
	30 22 37 6.80	15 28 41.7	.6124380	14 3.3		14 22 0 3.81	18 17 39.1	.6104684	10 25.4
	31 22 36 51.48	15 33 18.7	.6092844	13 59.1		15 21 59 35.00	18 15 37.1	.6137177	10 21.0
Aug. 1	22 36 33.06	15 38 6.7	.6062289	13 54.8		16 21 59 9.05	18 13 15.6	.6170635	10 16.7
	2 22 36 11.60	15 43 5.0	.6032759	13 50.5		17 21 58 46.02	18 10 34.7	.6205020	10 12.4
	3 22 35 47.13	15 48 12.9	.6004299	13 46.1		18 21 58 25.96	18 7 34.7	.6240292	10 8.1
	4 22 35 19.73	15 53 29.5	.5976953	13 41.7		19 21 58 8.89	18 4 15.9	.6276413	10 3.9
	5 22 34 49.45	15 58 54.0	.5950762	13 37.2		20 21 57 54.87	18 0 38.5	.6313344	9 59.8
	6 22 34 16.39	16 4 25.4	.5925767	13 32.7		21 21 57 43.90	17 56 42.7	.6351046	9 55.7
	7 22 33 40.62	16 10 3.0	.5902008	13 28.2		22 21 57 36.02	17 52 28.9	.6389480	9 51.7
	8 22 33 2.23	16 15 45.6	.5879522	13 23.6		23 21 57 31.23	17 47 57.3	.6428607	9 47.7
	9 22 32 21.32	16 21 32.2	.5858342	13 18.9		24 21 57 29.55	17 43 8.3	.6468390	9 43.7
	10 22 31 37.99	16 27 22.0	.5838504	13 14.3		25 21 57 30.98	17 38 2.1	.6508788	9 39.8
	11 22 30 52.35	16 33 13.8	.5820040	13 9.6		26 21 57 35.51	17 32 39.0	.6549767	9 36.0
	12 22 30 4.50	16 39 6.7	.5802979	13 4.8		27 21 57 43.17	17 26 59.3	.6591290	9 32.2
	13 22 29 14.57	16 44 59.5	.5787354	13 0.0		28 21 57 53.92	17 21 3.4	.6633320	9 28.5
	14 22 28 22.66	16 50 51.4	.5773190	12 55.2		29 21 58 7.76	17 14 51.5	.6675819	9 24.8
	15 22 27 28.90	16 56 41.2	.5760514	12 50.4		30 21 58 24.67	17 8 24.0	.6718754	9 21.2
	16 22 26 33.42	17 2 27.9	.5749353	12 45.5	Oct. 1	21 58 44.62	17 1 41.2	.6762089	9 17.6
	17 22 25 36.37	17 8 10.4	.5739731	12 40.7		2 21 59 7.59	16 54 43.3	.6805791	9 14.1
	18 22 24 37.89	S. 17 13 47.6	9.5731671	12 35.8		3 21 59 33.54	S. 16 47 30.8	9.6849825	9 10.6

		Hor. Par.	Semidiameter.			Hor. Par.	Semidiameter.
July	19	19.60	10.42	September	7	22.58	12.01
	29	21.32	11.34		17	21.08	11.21
August	8	22.73	12.09	October	27	19.29	10.26
	18	23.51	12.51		7	17.44	9.27
	28	23.47	12.48		17	15.70	8.35

Mean Noon.	Apparent Right Ascension.	Apparent Declination.	Log. of True Dist. from the Earth.	Merid. Passage.	Mean Noon.	Apparent Right Ascension.	Apparent Declination.	Log. of True Dist. from the Earth.	Merid. Passage.
	h m s	° ' "		h m		h m s	° ' "		h m
Oct. 3	21 59 33.54	S. 16 47 30.8	9.6849825	9 10.6	Nov. 18	22 58 14.82	S. 8 6 55.1	9.8918766	7 8.6
4	22 0 2.42	16 40 4.0	.6894159	9 7.2	19	23 0 4.99	7 52 40.8	.8961016	7 6.5
5	22 0 34.19	16 32 23.3	.6938764	9 3.8	20	23 1 56.04	7 38 21.4	.9003083	7 4.4
6	22 1 8.79	16 24 28.9	.6983606	9 0.4	21	23 3 47.94	7 23 57.1	.9044967	7 2.4
7	22 1 46.16	16 16 21.3	.7028663	8 57.1	22	23 5 40.67	7 9 28.0	.9086668	7 0.3
8	22 2 26.25	16 8 0.7	.7073908	8 53.9	23	23 7 34.21	6 54 54.3	.9128183	6 58.3
9	22 3 8.99	15 59 27.5	.7119319	8 50.7	24	23 9 28.55	6 40 16.0	.9169510	6 56.2
10	22 3 54.33	15 50 41.9	.7164874	8 47.5	25	23 11 23.66	6 25 33.2	.9210646	6 54.2
11	22 4 42.20	15 41 44.4	.7210555	8 44.4	26	23 13 19.54	6 10 46.0	.9251590	6 52.2
12	22 5 32.56	15 32 35.1	.7256341	8 41.3	27	23 15 16.16	5 55 54.7	.9292337	6 50.2
13	22 6 25.32	15 23 14.3	.7302217	8 38.3	28	23 17 13.51	5 40 59.2	.9332887	6 48.2
14	22 7 20.44	15 13 42.4	.7348168	8 35.3	29	23 19 11.57	5 25 59.8	.9373234	6 46.3
15	22 8 17.87	15 3 59.5	.7394178	8 32.3	30	23 21 10.32	5 10 56.5	.9413378	6 44.3
16	22 9 17.55	14 54 5.8	.7440234	8 29.4	Dec. 1	23 23 9.74	4 55 49.6	.9453315	6 42.4
17	22 10 19.43	14 44 1.7	.7486322	8 26.5	2	23 25 9.80	4 40 39.0	.9493047	6 40.4
18	22 11 23.47	14 33 47.3	.7532431	8 23.6	3	23 27 10.48	4 25 25.1	.9532570	6 38.5
19	22 12 29.62	14 23 22.7	.7578547	8 20.8	4	23 29 11.77	4 10 8.0	.9571885	6 36.6
20	22 13 37.81	14 12 48.3	.7624661	8 18.0	5	23 31 13.65	3 54 47.8	.9610991	6 34.7
21	22 14 48.01	14 2 4.1	.7670759	8 15.2	6	23 33 16.09	3 39 24.7	.9649890	6 32.8
22	22 16 0.17	13 51 10.4	.7716831	8 12.5	7	23 35 19.08	3 23 58.9	.9688581	6 30.9
23	22 17 14.25	13 40 7.4	.7762867	8 9.8	8	23 37 22.60	3 8 30.5	.9727066	6 29.0
24	22 18 30.20	13 28 55.2	.7808856	8 7.2	9	23 39 26.64	2 52 59.7	.9765345	6 27.1
25	22 19 47.99	13 17 33.9	.7854788	8 4.5	10	23 41 31.19	2 37 26.5	.9803420	6 25.3
26	22 21 7.58	13 6 3.7	.7900655	8 1.9	11	23 43 36.23	2 21 51.1	.9841293	6 23.4
27	22 22 28.92	12 54 24.8	.7946446	7 59.4	12	23 45 41.76	2 6 13.6	.9878963	6 21.6
28	22 23 51.98	12 42 37.2	.7992148	7 56.8	13	23 47 47.76	1 50 34.2	.9916435	6 19.7
29	22 25 16.70	12 30 41.3	.8037751	7 54.3	14	23 49 54.23	1 34 53.0	.9953707	6 17.9
30	22 26 43.06	12 18 37.1	.8083247	7 51.8	15	23 52 1.16	1 19 10.1	.9990782	6 16.1
31	22 28 11.00	12 6 24.7	.8128624	7 49.3	16	23 54 8.54	1 3 25.7	0.0027660	6 14.3
Nov. 1	22 29 40.47	11 54 4.5	.8173875	7 46.9	17	23 56 16.36	0 47 39.9	.0064344	6 12.5
2	22 31 11.44	11 41 36.5	.8218991	7 44.5	18	23 58 24.63	0 31 52.7	.0100831	6 10.7
3	22 32 43.86	11 29 0.9	.8263964	7 42.1	19	0 0 33.33	0 16 4.4	.0137126	6 8.9
4	22 34 17.17	11 16 17.9	.8308788	7 39.7	20	0 2 42.47	N. 0 0 14.9	.0173225	6 7.1
5	22 35 52.84	11 3 27.7	.8353458	7 37.4	21	0 4 52.03	N. 0 15 35.5	.0209133	6 5.3
6	22 37 29.31	10 50 30.5	.8397968	7 35.0	22	0 7 2.03	0 31 26.9	.0244847	6 3.5
7	22 39 7.03	10 37 26.4	.8442314	7 32.7	23	0 9 12.45	0 47 19.0	.0280366	6 1.8
8	22 40 45.98	10 24 15.7	.8486494	7 30.5	24	0 11 23.30	1 3 11.9	.0315692	6 0.0
9	22 42 26.10	10 10 58.5	.8530505	7 28.2	25	0 13 34.57	1 19 5.2	.0350822	5 58.3
10	22 44 7.37	9 57 34.9	.8574346	7 26.0	26	0 15 46.26	1 34 59.0	.0385756	5 56.5
11	22 45 49.75	9 44 5.2	.8618014	7 23.7	27	0 17 58.35	1 50 53.0	.0420491	5 54.8
12	22 47 33.20	9 30 29.3	.8661509	7 21.5	28	0 20 10.85	2 6 47.4	.0455027	5 53.1
13	22 49 17.70	9 16 47.6	.8704829	7 19.3	29	0 22 23.75	2 22 41.7	.0489364	5 51.3
14	22 51 3.20	9 3 0.0	.8747973	7 17.2	30	0 24 37.04	2 38 36.0	.0523500	5 49.6
15	22 52 49.69	8 49 0.9	.8790940	7 15.0	31	0 26 50.71	2 54 30.0	.0557436	5 47.9
16	22 54 37.14	8 35 8.3	.8833728	7 12.8	32	0 29 4.75	N. 3 10 23.7	0.0591171	5 46.2
17	22 56 25.52	8 21 4.3	.8876337	7 10.7					
18	22 58 14.82	S. 8 6 55.1	9.8918766	7 8.6					

		Hor. Par.	Semidiameter.			Hor. Par.	Semidiameter.
October	27	14.12	7.51	December	6	9.54	5.07
November	6	12.73	6.77		16	8.74	4.65
	16	11.51	6.13		26	8.05	4.28
	26	10.45	5.56		36	7.45	3.96

Mean Noon.	Apparent Right Ascension.	Apparent Declination.	Log. of True Dist. from the Earth.	Merid. Passage.	Mean Noon.	Apparent Right Ascension.	Apparent Declination.	Log. of True Dist. from the Earth.	Merid. Passage.
	h m s	° ' "		h m		h m s	° ' "		h m
Jan. 1	16 26 15.21	S. 21 0 22.2	0.7906591	21 44.0	Feb. 16	17 0 48.05	S. 22 3 28.5	0.7483626	19 17.2
2	16 27 7.41	21 2 19.9	.7900373	21 40.9	17	17 1 22.94	22 4 16.3	.7471703	19 13.9
3	16 27 59.40	21 4 16.0	.7894011	21 37.8	18	17 1 57.28	22 5 2.8	.7459687	19 10.5
4	16 28 51.17	21 6 10.5	.7887506	21 34.7	19	17 2 31.06	22 5 48.0	.7447580	19 7.1
5	16 29 42.72	21 8 3.4	.7880858	21 31.6	20	17 3 4.27	22 6 32.0	.7435385	19 3.7
6	16 30 34.03	21 9 54.7	.7874067	21 28.6	21	17 3 36.91	22 7 14.7	.7423103	19 0.3
7	16 31 25.10	21 11 44.3	.7867135	21 25.5	22	17 4 8.96	22 7 56.1	.7410735	18 56.9
8	16 32 15.93	21 13 32.3	.7860061	21 22.4	23	17 4 40.43	22 8 36.3	.7398285	18 53.5
9	16 33 6.50	21 15 18.7	.7852848	21 19.3	24	17 5 11.30	22 9 15.4	.7385753	18 50.1
10	16 33 56.81	21 17 3.5	.7845496	21 16.2	25	17 5 41.57	22 9 53.2	.7373143	18 46.6
11	16 34 46.86	21 18 46.6	.7838005	21 13.1	26	17 6 11.22	22 10 29.9	.7360455	18 43.2
12	16 35 36.63	21 20 28.2	.7830376	21 10.0	27	17 6 40.25	22 11 5.4	.7347691	18 39.8
13	16 36 26.11	21 22 8.1	.7822611	21 6.9	28	17 7 8.65	22 11 39.7	.7334855	18 36.3
14	16 37 15.30	21 23 46.4	.7814710	21 3.7	29	17 7 36.41	22 12 12.9	.7321948	18 32.8
15	16 38 4.19	21 25 23.1	.7806673	21 0.6	Mar. 1	17 8 3.53	22 12 45.0	.7308973	18 29.3
16	16 38 52.78	21 26 58.2	.7798502	20 57.5	2	17 8 29.99	22 13 15.9	.7295933	18 25.8
17	16 39 41.05	21 28 31.7	.7790198	20 54.4	3	17 8 55.79	22 13 45.8	.7282830	18 22.3
18	16 40 29.01	21 30 3.6	.7781762	20 51.2	4	17 9 20.92	22 14 14.5	.7269668	18 18.8
19	16 41 16.64	21 31 33.9	.7773194	20 48.1	5	17 9 45.37	22 14 42.2	.7256449	18 15.2
20	16 42 3.94	21 33 2.7	.7764495	20 44.9	6	17 10 9.14	22 15 8.8	.7243177	18 11.7
21	16 42 50.90	21 34 29.8	.7755667	20 41.8	7	17 10 32.22	22 15 34.3	.7229855	18 8.1
22	16 43 37.52	21 35 55.4	.7746710	20 38.6	8	17 10 54.60	22 15 58.8	.7216486	18 4.6
23	16 44 23.79	21 37 19.4	.7737624	20 35.4	9	17 11 16.27	22 16 22.2	.7203073	18 1.0
24	16 45 9.69	21 38 41.8	.7728411	20 32.3	10	17 11 37.24	22 16 44.6	.7189620	17 57.4
25	16 45 55.23	21 40 2.7	.7719071	20 29.1	11	17 11 57.49	22 17 5.9	.7176129	17 53.8
26	16 46 40.40	21 41 22.1	.7709604	20 25.9	12	17 12 17.02	22 17 26.3	.7162604	17 50.2
27	16 47 25.19	21 42 40.0	.7700011	20 22.7	13	17 12 35.82	22 17 45.7	.7149049	17 46.6
28	16 48 9.58	21 43 56.3	.7690293	20 19.5	14	17 12 53.89	22 18 4.1	.7135467	17 42.9
29	16 48 53.58	21 45 11.1	.7680451	20 16.3	15	17 13 11.23	22 18 21.6	.7121861	17 39.3
30	16 49 37.17	21 46 24.4	.7670487	20 13.1	16	17 13 27.82	22 18 38.2	.7108234	17 35.6
31	16 50 20.35	21 47 36.2	.7660401	20 9.8	17	17 13 43.67	22 18 53.8	.7094591	17 31.9
Feb. 1	16 51 3.10	21 48 46.5	.7650194	20 6.6	18	17 13 58.77	22 19 8.5	.7080934	17 28.2
2	16 51 45.43	21 49 55.3	.7639867	20 3.4	19	17 14 13.12	22 19 22.2	.7067266	17 24.5
3	16 52 27.31	21 51 2.7	.7629422	20 0.1	20	17 14 26.71	22 19 35.1	.7053592	17 20.8
4	16 53 8.75	21 52 8.6	.7618861	19 56.9	21	17 14 39.53	22 19 47.1	.7039914	17 17.1
5	16 53 49.73	21 53 13.0	.7608184	19 53.6	22	17 14 51.59	22 19 58.2	.7026236	17 13.3
6	16 54 30.24	21 54 16.0	.7597393	19 50.4	23	17 15 2.87	22 20 8.5	.7012562	17 9.6
7	16 55 10.28	21 55 17.5	.7586491	19 47.1	24	17 15 13.38	22 20 17.8	.6998895	17 5.8
8	16 55 49.84	21 56 17.6	.7575479	19 43.8	25	17 15 23.10	22 20 26.3	.6985239	17 2.0
9	16 56 28.90	21 57 16.3	.7564358	19 40.5	26	17 15 32.04	22 20 34.0	.6971597	16 58.2
10	16 57 7.47	21 58 13.6	.7553130	19 37.2	27	17 15 40.19	22 20 40.8	.6957974	16 54.4
11	16 57 45.54	21 59 9.5	.7541797	19 33.9	28	17 15 47.53	22 20 46.8	.6944375	16 50.6
12	16 58 23.10	22 0 4.0	.7530362	19 30.6	29	17 15 54.08	22 20 51.9	.6930803	16 46.7
13	16 59 0.13	22 0 57.1	.7518825	19 27.3	30	17 15 59.83	22 20 56.2	.6917263	16 42.9
14	16 59 36.64	22 1 48.8	.7507189	19 23.9	31	17 16 4.77	22 20 59.7	.6903760	16 39.1
15	17 0 12.61	22 2 39.3	.7495456	19 20.6	Apr. 1	17 16 8.90	22 21 2.4	.6890299	16 35.2
16	17 0 48.05	S. 22 3 28.5	0.7483626	19 17.2	2	17 16 12.21	S. 22 21 4.3	0.6876884	16 31.3

		Hor. Par.	Polar Semidiameter.			Hor. Par.	Polar Semidiameter.
January	1	1.43	14.89	February	20	1.59	16.59
	11	1.45	15.12	March	1	1.64	17.08
	21	1.48	15.41		11	1.69	17.61
	31	1.51	15.75		21	1.74	18.17
February	10	1.55	16.15		31	1.80	18.74

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Mean Noon	Apparent Light Ascension.	Apparent Declination.	Log. of True Dist. from the Earth.	Merid. Passage.	Mean Noon	Apparent Light Ascension.	Apparent Declination.	Log. of True Dist. from the Earth.	Merid. Passage.
	h m s	° ' "		h m		h m s	° ' "		h m
Apr. 2	17 16 12.21	S. 22 21 4.3	0.6876884	16 31.3	May 18	17 5 4.12	S. 22 8 21.5	0.6395433	13 19.0
3	17 16 14.71	22 21 5.4	0.6863520	16 27.4	19	17 4 35.03	22 7 47.0	0.6389748	13 14.6
4	17 16 16.40	22 21 5.7	0.6850211	16 23.5	20	17 4 5.55	22 7 11.8	0.6384333	13 10.2
5	17 16 17.28	22 21 5.1	0.6836964	16 19.6	21	17 3 35.70	22 6 35.9	0.6379191	13 5.8
6	17 16 17.34	22 21 3.8	0.6823783	16 15.6	22	17 3 5.49	22 5 59.4	0.6374325	13 1.3
7	17 16 16.59	22 21 1.7	0.6810672	16 11.7	23	17 2 34.96	22 5 22.3	0.6369738	12 56.9
8	17 16 15.02	22 20 58.8	0.6797637	16 7.7	24	17 2 4.12	22 4 44.5	0.6365433	12 52.5
9	17 16 12.65	22 20 55.1	0.6784683	16 3.7	25	17 1 32.98	22 4 6.1	0.6361413	12 48.0
10	17 16 9.46	22 20 50.6	0.6771815	15 59.7	26	17 1 1.58	22 3 27.2	0.6357680	12 43.5
11	17 16 5.47	22 20 45.3	0.6759038	15 55.7	27	17 0 29.93	22 2 47.7	0.6354238	12 39.1
12	17 16 0.67	22 20 39.2	0.6746358	15 51.7	28	16 59 58.05	22 2 7.6	0.6351087	12 34.6
13	17 15 55.06	22 20 32.4	0.6733778	15 47.7	29	16 59 25.97	22 1 27.0	0.6348231	12 30.2
14	17 15 48.66	22 20 24.7	0.6721304	15 43.6	30	16 58 53.71	22 0 45.9	0.6345672	12 25.7
15	17 15 41.47	22 20 16.3	0.6708940	15 39.6	31	16 58 21.30	22 0 4.4	0.6343411	12 21.2
16	17 15 33.49	22 20 7.1	0.6696691	15 35.5	June 1	16 57 48.75	21 59 22.4	0.6341448	12 16.8
17	17 15 24.72	22 19 57.2	0.6684561	15 31.4	2	16 57 16.09	21 58 40.0	0.6339786	12 12.3
18	17 15 15.17	22 19 46.5	0.6672557	15 27.3	3	16 56 43.35	21 57 57.2	0.6338425	12 7.8
19	17 15 4.85	22 19 35.0	0.6660682	15 23.2	4	16 56 10.55	21 57 14.1	0.6337365	12 3.3
20	17 14 53.75	22 19 22.8	0.6648941	15 19.1	5	16 55 37.71	21 56 30.7	0.6336607	11 58.9
21	17 14 41.88	22 19 9.7	0.6637339	15 14.9	6	16 55 4.86	21 55 47.0	0.6336152	11 54.4
22	17 14 29.25	22 18 55.9	0.6625881	15 10.8	7	16 54 32.02	21 55 3.1	0.6336000	11 49.8
23	17 14 15.86	22 18 41.3	0.6614572	15 6.6	8	16 53 59.21	21 54 19.0	0.6336149	11 45.4
24	17 14 1.72	22 18 26.0	0.6603418	15 2.5	9	16 53 26.47	21 53 34.7	0.6336598	11 41.0
25	17 13 46.84	22 18 9.8	0.6592423	14 58.3	10	16 52 53.81	21 52 50.3	0.6337348	11 36.5
26	17 13 31.22	22 17 52.9	0.6581593	14 54.1	11	16 52 21.25	21 52 5.8	0.6338396	11 32.0
27	17 13 14.87	22 17 35.2	0.6570934	14 49.9	12	16 51 48.83	21 51 21.2	0.6339742	11 27.5
28	17 12 57.80	22 17 16.6	0.6560450	14 45.6	13	16 51 16.55	21 50 36.7	0.6341384	11 23.1
29	17 12 40.02	22 16 57.3	0.6550148	14 41.4	14	16 50 44.44	21 49 52.2	0.6343320	11 18.6
30	17 12 21.53	22 16 37.2	0.6540032	14 37.1	15	16 50 12.53	21 49 7.7	0.6345549	11 14.1
May 1	17 12 2.35	22 16 16.3	0.6530108	14 32.9	16	16 49 40.83	21 48 23.4	0.6348069	11 9.6
2	17 11 42.49	22 15 54.5	0.6520382	14 28.6	17	16 49 9.36	21 47 39.3	0.6350878	11 5.2
3	17 11 21.96	22 15 32.0	0.6510858	14 24.4	18	16 48 38.14	21 46 55.4	0.6353974	11 0.8
4	17 11 0.78	22 15 8.7	0.6501541	14 20.1	19	16 48 7.20	21 46 11.7	0.6357355	10 56.3
5	17 10 38.96	22 14 44.6	0.6492438	14 15.8	20	16 47 36.55	21 45 28.2	0.6361018	10 51.9
6	17 10 16.51	22 14 19.7	0.6483551	14 11.5	21	16 47 6.21	21 44 45.1	0.6364962	10 47.5
7	17 9 53.45	22 13 54.1	0.6474887	14 7.1	22	16 46 36.20	21 44 2.3	0.6369184	10 43.1
8	17 9 29.79	22 13 27.6	0.6466449	14 2.8	23	16 46 6.54	21 43 19.9	0.6373682	10 38.7
9	17 9 5.55	22 13 0.3	0.6458242	13 58.5	24	16 45 37.25	21 42 38.0	0.6378454	10 34.2
10	17 8 40.75	22 12 32.3	0.6450269	13 54.1	25	16 45 8.36	21 41 56.5	0.6383496	10 29.8
11	17 8 15.41	22 12 3.5	0.6442537	13 49.8	26	16 44 39.88	21 41 15.6	0.6388807	10 25.4
12	17 7 49.53	22 11 34.0	0.6435048	13 45.4	27	16 44 11.82	21 40 35.2	0.6394383	10 21.0
13	17 7 23.14	22 11 3.7	0.6427807	13 41.0	28	16 43 44.22	21 39 55.5	0.6400220	10 16.6
14	17 6 56.25	22 10 32.7	0.6420817	13 36.7	29	16 43 17.08	21 39 16.5	0.6406314	10 12.3
15	17 6 28.89	22 10 0.9	0.6414081	13 32.3	30	16 42 50.43	21 38 38.2	0.6412662	10 7.9
16	17 6 1.07	22 9 28.5	0.6407603	13 27.9	July 1	16 42 24.27	21 38 0.6	0.6419260	10 3.5
17	17 5 32.81	22 8 55.3	0.6401386	13 23.4	2	16 41 58.64	21 37 23.8	0.6426104	9 59.2
18	17 5 4.12	S. 22 8 21.5	0.6395433	13 19.0	3	16 41 33.55	S. 21 36 47.8	0.6433190	9 54.8

		Hor. Par.	Polar Semidiameter.			Hor. Par.	Polar Semidiameter.
April	10	1.85	19.32	May	30	2.04	21.32
	20	1.90	19.88	June	9	2.05	21.36
	30	1.95	20.39		19	2.04	21.26
May	10	1.99	20.81		29	2.01	21.02
	20	2.02	21.13	July	9	1.98	20.67

Mean Noon.	Apparent Right Ascension.	Apparent Declination.	Log. of True Dist. from the Earth.	Merid. Passage.	Mean Noon.	Apparent Right Ascension.	Apparent Declination.	Log. of True Dist. from the Earth.	Merid. Passage.
	h m s	° ' "		h m		h m s	° ' "		h m
July 3	16 41 33.55	S. 21 36 47.8	0.6433190	9 54.8	Aug. 18	16 34 48.38	S. 21 32 47.2	0.6936690	6 47.5
4	16 41 9.01	21 36 12.7	.6440514	9 50.5	19	16 34 57.53	21 33 17.6	.6949681	6 43.7
5	16 40 45.04	21 35 38.6	.6448070	9 46.2	20	16 35 7.43	21 33 49.5	.6962688	6 39.9
6	16 40 21.65	21 35 5.4	.6455854	9 41.9	21	16 35 18.10	21 34 22.8	.6975708	6 36.1
7	16 39 58.86	21 34 33.3	.6463861	9 37.6	22	16 35 29.52	21 34 57.6	.6988738	6 32.4
8	16 39 36.68	21 34 2.2	.6472086	9 33.3	23	16 35 41.70	21 35 33.7	.7001773	6 28.7
9	16 39 15.13	21 33 32.2	.6480525	9 29.0	24	16 35 54.62	21 36 11.3	.7014809	6 25.0
10	16 38 54.21	21 33 3.3	.6489171	9 24.7	25	16 36 8.29	21 36 50.2	.7027844	6 21.3
11	16 38 33.93	21 32 35.6	.6498020	9 20.4	26	16 36 22.71	21 37 30.5	.7040872	6 17.6
12	16 38 14.31	21 32 9.1	.6507067	9 16.2	27	16 36 37.88	21 38 12.1	.7053892	6 13.9
13	16 37 55.36	21 31 43.8	.6516308	9 11.9	28	16 36 53.78	21 38 55.1	.7066899	6 10.3
14	16 37 37.08	21 31 19.7	.6525737	9 7.7	29	16 37 10.41	21 39 39.4	.7079889	6 6.6
15	16 37 19.49	21 30 56.9	.6535349	9 3.5	30	16 37 27.78	21 40 24.9	.7092860	6 2.9
16	16 37 2.59	21 30 35.5	.6545139	8 59.3	31	16 37 45.87	21 41 11.7	.7105807	5 59.3
17	16 36 46.38	21 30 15.3	.6555103	8 55.1	Sept. 1	16 38 4.68	21 41 59.6	.7118727	5 55.7
18	16 36 30.88	21 29 56.5	.6565236	8 50.9	2	16 38 24.21	21 42 48.8	.7131616	5 52.1
19	16 36 16.10	21 29 39.1	.6575534	8 46.7	3	16 38 44.44	21 43 39.1	.7144472	5 48.5
20	16 36 2.04	21 29 23.1	.6585992	8 42.6	4	16 39 5.38	21 44 30.6	.7157292	5 44.9
21	16 35 48.70	21 29 8.5	.6596604	8 38.4	5	16 39 27.01	21 45 23.2	.7170071	5 41.3
22	16 35 36.11	21 28 55.3	.6607366	8 34.3	6	16 39 49.33	21 46 16.9	.7182807	5 37.8
23	16 35 24.25	21 28 43.6	.6618274	8 30.2	7	16 40 12.34	21 47 11.6	.7195497	5 34.3
24	16 35 13.14	21 28 33.4	.6629322	8 26.1	8	16 40 36.02	21 48 7.3	.7208138	5 30.7
25	16 35 2.78	21 28 24.6	.6640506	8 22.0	9	16 41 0.37	21 49 4.0	.7220728	5 27.2
26	16 34 53.19	21 28 17.4	.6651821	8 17.9	10	16 41 25.39	21 50 1.7	.7233264	5 23.7
27	16 34 44.36	21 28 11.7	.6663262	8 13.8	11	16 41 51.06	21 51 0.2	.7245744	5 20.2
28	16 34 36.30	21 28 7.5	.6674824	8 9.7	12	16 42 17.38	21 51 59.7	.7258166	5 16.7
29	16 34 29.02	21 28 4.9	.6686502	8 5.7	13	16 42 44.35	21 53 0.0	.7270528	5 13.2
30	16 34 22.52	21 28 3.9	.6698290	8 1.7	14	16 43 11.96	21 54 1.1	.7282828	5 9.7
31	16 34 16.80	21 28 4.5	.6710184	7 57.6	15	16 43 40.20	21 55 3.0	.7295063	5 6.3
Aug. 1	16 34 11.86	21 28 6.7	.6722178	7 53.6	16	16 44 9.07	21 56 5.7	.7307232	5 2.8
2	16 34 7.71	21 28 10.4	.6734267	7 49.6	17	16 44 38.55	21 57 9.1	.7319332	4 59.4
3	16 34 4.35	21 28 15.8	.6746447	7 45.7	18	16 45 8.65	21 58 13.2	.7331361	4 55.9
4	16 34 1.78	21 28 22.7	.6758712	7 41.7	19	16 45 39.37	21 59 17.9	.7343316	4 52.5
5	16 34 0.01	21 28 31.3	.6771057	7 37.7	20	16 46 10.69	22 0 23.3	.7355197	4 49.1
6	16 33 59.02	21 28 41.5	.6783477	7 33.8	21	16 46 42.61	22 1 29.2	.7367000	4 45.7
7	16 33 58.83	21 28 53.3	.6795967	7 29.8	22	16 47 15.13	22 2 35.7	.7378725	4 42.3
8	16 33 59.42	21 29 6.7	.6808523	7 25.9	23	16 47 48.24	22 3 42.8	.7390369	4 38.9
9	16 34 0.80	21 29 21.7	.6821139	7 22.0	24	16 48 21.94	22 4 50.3	.7401929	4 35.6
10	16 34 2.97	21 29 38.4	.6833810	7 18.1	25	16 48 56.21	22 5 58.3	.7413404	4 32.2
11	16 34 5.93	21 29 56.6	.6846533	7 14.2	26	16 49 31.06	22 7 6.7	.7424791	4 28.8
12	16 34 9.67	21 30 16.3	.6859304	7 10.4	27	16 50 6.47	22 8 15.5	.7436088	4 25.5
13	16 34 14.19	21 30 37.6	.6872117	7 6.5	28	16 50 42.44	22 9 24.7	.7447293	4 22.2
14	16 34 19.48	21 31 0.5	.6884969	7 2.7	29	16 51 18.96	22 10 34.2	.7458404	4 18.8
15	16 34 25.55	21 31 25.0	.6897856	6 58.9	30	16 51 56.03	22 11 44.1	.7469420	4 15.5
16	16 34 32.39	21 31 50.9	.6910774	6 55.0	Oct. 1	16 52 33.63	22 12 54.2	.7480339	4 12.2
17	16 34 40.00	21 32 18.3	.6923720	6 51.2	2	16 53 11.77	22 14 4.5	.7491158	4 8.9
18	16 34 48.38	S. 21 32 47.2	0.6936690	6 47.5	3	16 53 50.44	S. 22 15 15.0	0.7501875	4 5.6

		Hor. Par.	Polar Semidiameter.			Hor. Par.	Polar Semidiameter.
July	19	1.94	20.22	September	7	1.68	17.53
	29	1.89	19.71		17	1.63	17.03
August	8	1.83	19.16		27	1.59	16.58
	18	1.78	18.60	October	7	1.55	16.18
	28	1.73	18.06		17	1.51	15.83

Mean Noon.	Apparent Right Ascension.	Apparent Declination.	Log. of True Dist. from the Earth.	Merid. Passage.	Mean Noon.	Apparent Right Ascension.	Apparent Declination.	Log. of True Dist. from the Earth.	Merid. Passage.
	h m s	° ' "		h m		h m s	° ' "		h m
Oct. 3	16 53 50.44	S. 22 15 15.0	0.7501875	4 5.6	Nov. 18	17 31 3.22	S. 23 3 28.5	0.7866152	1 41.8
4	16 54 29.63	22 16 25.7	.7512489	4 2.4	19	17 31 59.25	23 4 13.2	.7870946	1 38.8
5	16 55 9.32	22 17 36.5	.7523000	3 59.1	20	17 32 55.50	23 4 56.8	.7875597	1 35.8
6	16 55 49.52	22 18 47.3	.7533404	3 55.8	21	17 33 51.97	23 5 39.2	.7880105	1 32.8
7	16 56 30.21	22 19 58.2	.7543702	3 52.6	22	17 34 48.64	23 6 20.4	.7884469	1 29.9
8	16 57 11.39	22 21 9.1	.7553892	3 49.3	23	17 35 45.52	23 7 0.4	.7888689	1 26.9
9	16 57 53.05	22 22 20.0	.7563973	3 46.1	24	17 36 42.59	23 7 39.2	.7892763	1 23.9
10	16 58 33.19	22 23 30.9	.7573944	3 42.8	25	17 37 39.86	23 8 16.8	.7896691	1 20.9
11	16 59 17.79	22 24 41.7	.7583804	3 39.6	26	17 38 37.31	23 8 53.1	.7900472	1 17.9
12	17 0 0.86	22 25 52.3	.7593552	3 36.4	27	17 39 34.94	23 9 28.2	.7904106	1 14.9
13	17 0 44.38	22 27 2.8	.7603187	3 33.2	28	17 40 32.73	23 10 2.0	.7907592	1 12.0
14	17 1 28.35	22 28 13.1	.7612707	3 30.0	29	17 41 30.68	23 10 34.5	.7910930	1 9.0
15	17 2 12.76	22 29 23.1	.7622112	3 26.8	30	17 42 28.79	23 11 5.7	.7914120	1 6.0
16	17 2 57.61	22 30 32.9	.7631401	3 23.6	Dec. 1	17 43 27.05	23 11 35.6	.7917162	1 3.1
17	17 3 42.90	22 31 42.5	.7640572	3 20.4	2	17 44 25.45	23 12 4.2	.7920056	1 0.1
18	17 4 28.62	22 32 51.7	.7649625	3 17.3	3	17 45 23.98	23 12 31.4	.7922801	0 57.1
19	17 5 14.75	22 34 0.6	.7658559	3 14.1	4	17 46 22.64	23 12 57.3	.7925398	0 54.2
20	17 6 1.30	22 35 9.1	.7667372	3 10.9	5	17 47 21.42	23 13 21.8	.7927846	0 51.2
21	17 6 48.27	22 36 17.2	.7676064	3 7.8	6	17 48 20.31	23 13 44.9	.7930146	0 48.3
22	17 7 35.63	22 37 24.9	.7684633	3 4.6	7	17 49 19.31	23 14 6.6	.7932297	0 45.3
23	17 8 23.39	22 38 32.1	.7693077	3 1.5	8	17 50 18.42	23 14 26.9	.7934300	0 42.4
24	17 9 11.55	22 39 38.9	.7701396	2 58.4	9	17 51 17.62	23 14 45.8	.7936154	0 39.4
25	17 10 0.09	22 40 45.1	.7709589	2 55.2	10	17 52 16.91	23 15 3.4	.7937860	0 36.5
26	17 10 49.01	22 41 50.8	.7717654	2 52.1	11	17 53 16.29	23 15 19.5	.7939417	0 33.5
27	17 11 38.30	22 42 55.9	.7725590	2 49.0	12	17 54 15.75	23 15 34.2	.7940826	0 30.6
28	17 12 27.96	22 44 0.4	.7733397	2 45.9	13	17 55 15.29	23 15 47.4	.7942085	0 27.6
29	17 13 17.99	22 45 4.3	.7741073	2 42.8	14	17 56 14.89	23 15 59.3	.7943195	0 24.7
30	17 14 8.36	22 46 7.6	.7748618	2 39.7	15	17 57 14.56	23 16 9.7	.7944155	0 21.8
31	17 14 59.08	22 47 10.1	.7756030	2 36.6	16	17 58 14.29	23 16 18.6	.7944966	0 18.8
Nov. 1	17 15 50.14	22 48 11.9	.7763309	2 33.5	17	17 59 14.07	23 16 26.1	.7945627	0 15.9
2	17 16 41.52	22 49 13.0	.7770454	2 30.5	18	18 0 13.90	23 16 32.2	.7946138	0 12.9
3	17 17 33.23	22 50 13.3	.7777465	2 27.4	19	18 1 13.77	23 16 36.8	.7946499	0 10.0
4	17 18 25.25	22 51 12.8	.7784340	2 24.3	20	18 2 13.67	23 16 40.0	.7946709	0 7.1
5	17 19 17.58	22 52 11.5	.7791079	2 21.2	21	18 3 13.60	23 16 41.7	.7946767	0 4.1
6	17 20 10.21	22 53 9.4	.7797681	2 18.2	22	18 4 13.55	23 16 42.0	.7946675	{ 0 1.2 23 58.2
7	17 21 3.14	22 54 6.3	.7804147	2 15.1	23	18 5 13.52	23 16 40.8	.7946430	23 55.3
8	17 21 56.36	22 55 2.4	.7810476	2 12.1	24	18 6 13.50	23 16 38.2	.7946034	23 52.4
9	17 22 49.86	22 55 57.5	.7816668	2 9.0	25	18 7 13.48	23 16 34.1	.7945485	23 49.4
10	17 23 43.65	22 56 51.7	.7822723	2 6.0	26	18 8 13.45	23 16 28.6	.7944783	23 46.5
11	17 24 37.70	22 57 44.9	.7828640	2 3.0	27	18 9 13.41	23 16 21.6	.7943929	23 43.5
12	17 25 32.02	22 58 37.1	.7834418	1 59.9	28	18 10 13.35	23 16 13.2	.7942922	23 40.6
13	17 26 26.60	22 59 28.3	.7840058	1 56.9	29	18 11 13.27	23 16 3.4	.7941763	23 37.7
14	17 27 21.44	23 0 18.5	.7845558	1 53.9	30	18 12 13.14	23 15 52.1	.7940453	23 34.7
15	17 28 16.53	23 1 7.6	.7850918	1 50.9	31	18 13 12.97	23 15 39.4	.7938991	23 31.8
16	17 29 11.85	23 1 55.7	.7856137	1 47.9	32	18 14 12.76	S. 23 15 25.3	0.7937379	23 28.8
17	17 30 7.42	23 2 42.7	.7861215	1 44.8					
18	17 31 3.22	S. 23 3 28.5	0.7866152	1 41.8					

		Hor. Par.	Polar Semidiameter.			Hor. Par.	Polar Semidiameter.
October	27	1.49	15.52	December	6	1.42	14.81
November	6	1.46	15.26		16	1.41	14.76
	16	1.44	15.06		26	1.41	14.76
	26	1.43	14.91		36	1.42	14.81

Mean Noon.	Apparent Right Ascension.	Apparent Declination.	Log. of True Dist. from the Earth.	Merid. Passage.	Mean Noon.	Apparent Right Ascension.	Apparent Declination.	Log. of True Dist. from the Earth.	Merid. Passage.
	h m s	° ' "		h m		h m s	° ' "		h m
Jan. 1	13 58 35.79	S. 9 32 30.8	1.0016131	19 16.2	Feb. 16	14 4 7.70	S. 9 50 8.3	0.9680997	16 20.6
2	13 58 51.25	9 33 40.7	.0009387	19 12.5	17	14 4 5.68	9 49 41.4	.9673933	16 16.6
3	13 59 6.38	9 34 48.7	1.0002591	19 8.8	18	14 4 3.27	9 49 12.4	.9666917	16 12.6
4	13 59 21.19	9 35 54.7	0.9995743	19 5.1	19	14 4 0.46	9 48 41.4	.9659952	16 8.6
5	13 59 35.66	9 36 58.7	.9988846	19 1.4	20	14 3 57.27	9 48 8.4	.9653039	16 4.6
6	13 59 49.80	9 38 0.7	.9981902	18 57.7	21	14 3 53.68	9 47 33.3	.9646181	16 0.6
7	14 0 3.59	9 39 0.7	.9974912	18 54.0	22	14 3 49.70	9 46 56.3	.9639380	15 56.7
8	14 0 17.04	9 39 58.6	.9967878	18 50.3	23	14 3 45.34	9 46 17.3	.9632639	15 52.7
9	14 0 30.14	9 40 54.4	.9960803	18 46.6	24	14 3 40.59	9 45 36.4	.9625961	15 48.6
10	14 0 42.89	9 41 48.3	.9953688	18 42.9	25	14 3 35.45	9 44 53.6	.9619348	15 44.6
11	14 0 55.29	9 42 40.1	.9946536	18 39.1	26	14 3 29.94	9 44 8.8	.9612802	15 40.6
12	14 1 7.34	9 43 29.8	.9939348	18 35.4	27	14 3 24.05	9 43 22.2	.9606326	15 36.6
13	14 1 19.02	9 44 17.4	.9932126	18 31.6	28	14 3 17.78	9 42 33.7	.9599923	15 32.5
14	14 1 30.35	9 45 3.0	.9924871	18 27.9	29	14 3 11.15	9 41 43.3	.9593596	15 28.5
15	14 1 41.31	9 45 46.4	.9917585	18 24.1	Mar. 1	14 3 4.14	9 40 51.1	.9587347	15 24.4
16	14 1 51.91	9 46 27.8	.9910272	18 20.4	2	14 2 56.76	9 39 57.0	.9581179	15 20.4
17	14 2 2.14	9 47 7.0	.9902932	18 16.6	3	14 2 49.03	9 39 1.2	.9575094	15 16.3
18	14 2 12.00	9 47 44.1	.9895568	18 12.8	4	14 2 40.93	9 38 3.6	.9569094	15 12.2
19	14 2 21.48	9 48 19.1	.9888182	18 9.0	5	14 2 32.49	9 37 4.3	.9563183	15 8.2
20	14 2 30.59	9 48 52.0	.9880776	18 5.2	6	14 2 23.70	9 36 3.3	.9557362	15 4.1
21	14 2 39.31	9 49 22.8	.9873351	18 1.4	7	14 2 14.56	9 35 0.6	.9551635	15 0.0
22	14 2 47.66	9 49 51.4	.9865909	17 57.6	8	14 2 5.08	9 33 56.2	.9546003	14 55.9
23	14 2 55.62	9 50 17.9	.9858453	17 53.8	9	14 1 55.27	9 32 50.3	.9540470	14 51.8
24	14 3 3.20	9 50 42.3	.9850985	17 50.0	10	14 1 45.13	9 31 42.8	.9535039	14 47.7
25	14 3 10.40	9 51 4.6	.9843506	17 46.2	11	14 1 34.67	9 30 33.7	.9529711	14 43.6
26	14 3 17.21	9 51 24.7	.9836018	17 42.4	12	14 1 23.89	9 29 23.1	.9524488	14 39.5
27	14 3 23.62	9 51 42.6	.9828524	17 38.6	13	14 1 12.80	9 28 11.0	.9519373	14 35.3
28	14 3 29.64	9 51 58.4	.9821025	17 34.8	14	14 1 1.41	9 26 57.5	.9514366	14 31.2
29	14 3 35.27	9 52 12.0	.9813525	17 30.9	15	14 0 49.72	9 25 42.6	.9509470	14 27.1
30	14 3 40.50	9 52 23.4	.9806025	17 27.1	16	14 0 37.74	9 24 26.3	.9504687	14 23.0
31	14 3 45.33	9 52 32.7	.9798528	17 23.2	17	14 0 25.47	9 23 8.7	.9500020	14 18.8
Feb. 1	14 3 49.76	9 52 39.8	.9791036	17 19.3	18	14 0 12.93	9 21 49.8	.9495471	14 14.7
2	14 3 53.78	9 52 44.8	.9783551	17 15.5	19	14 0 0.11	9 20 29.7	.9491041	14 10.5
3	14 3 57.41	9 52 47.6	.9776077	17 11.6	20	13 59 47.03	9 19 8.4	.9486731	14 6.4
4	14 4 0.63	9 52 48.2	.9768615	17 7.7	21	13 59 33.77	9 17 45.9	.9482544	14 2.2
5	14 4 3.44	9 52 46.6	.9761168	17 3.8	22	13 59 20.11	9 16 22.2	.9478480	13 58.1
6	14 4 5.85	9 52 42.9	.9753739	16 59.9	23	13 59 6.27	9 14 57.5	.9474542	13 53.9
7	14 4 7.85	9 52 37.0	.9746330	16 56.0	24	13 58 52.19	9 13 31.7	.9470732	13 49.7
8	14 4 9.45	9 52 29.0	.9738944	16 52.1	25	13 58 37.89	9 12 5.0	.9467050	13 45.6
9	14 4 10.64	9 52 18.8	.9731584	16 48.1	26	13 58 23.36	9 10 37.2	.9463500	13 41.4
10	14 4 11.43	9 52 6.4	.9724252	16 44.2	27	13 58 8.62	9 9 8.6	.9460083	13 37.2
11	14 4 11.81	9 51 51.9	.9716951	16 40.3	28	13 57 53.67	9 7 39.0	.9456801	13 33.0
12	14 4 11.79	9 51 35.4	.9709684	16 36.4	29	13 57 38.52	9 6 8.7	.9453654	13 28.8
13	14 4 11.36	9 51 16.7	.9702452	16 32.5	30	13 57 23.16	9 4 37.5	.9450645	13 24.7
14	14 4 10.54	9 50 56.0	.9695259	16 28.5	31	13 57 7.62	9 3 5.5	.9447774	13 20.5
15	14 4 9.32	9 50 33.2	.9688107	16 24.5	Apr. 1	13 56 51.90	9 1 32.8	.9445044	13 16.3
16	14 4 7.70	S. 9 50 8.3	0.9680997	16 20.6	2	13 56 36.02	S. 8 59 59.5	0.9442456	13 12.1

	Hor. Par.	Polar Semidiameter.		Hor. Par.	Polar Semidiameter.
January 1	0.88	7.43	February 20	0.95	8.07
11	0.89	7.55	March 1	0.97	8.20
21	0.90	7.68	11	0.98	8.31
31	0.92	7.81	21	0.99	8.40
February 10	0.94	7.95	31	1.00	8.47

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Mean Noon.	Apparent Right Ascension.	Apparent Declination.	Log. of True Dist. from the Earth.	Merid. Passage.	Mean Noon.	Apparent Right Ascension.	Apparent Declination.	Log. of True Dist. from the Earth.	Merid. Passage.
	h m s	° ' "		h m		h m s	° ' "		h m
Apr. 2	13 56 36.02	S. 8 59 59.5	0.9442456	13 12.1	May 18	13 43 59.82	S. 7 51 18.0	0.9482711	9 58.7
3	13 56 19.97	8 58 25.6	.9440011	13 7.9	19	13 43 46.09	7 50 10.2	.9486862	9 54.5
4	13 56 3.78	8 56 51.1	.9437710	13 3.7	20	13 43 32.60	7 49 4.0	.9491131	9 50.4
5	13 55 47.44	8 55 16.1	.9435554	12 59.5	21	13 43 19.36	7 47 59.4	.9495518	9 46.2
6	13 55 30.97	8 53 40.7	.9433545	12 55.3	22	13 43 6.36	7 46 56.5	.9500021	9 42.1
7	13 55 14.38	8 52 4.9	.9431684	12 51.1	23	13 42 53.62	7 45 55.3	.9504638	9 38.0
8	13 54 57.68	8 50 28.7	.9429972	12 46.9	24	13 42 41.15	7 44 55.8	.9509366	9 33.8
9	13 54 40.87	8 48 52.3	.9428407	12 42.6	25	13 42 28.94	7 43 58.0	.9514204	9 29.7
10	13 54 23.97	8 47 15.6	.9426992	12 38.4	26	13 42 17.00	7 43 2.0	.9519151	9 25.6
11	13 54 6.98	8 45 38.7	.9425726	12 34.2	27	13 42 5.35	7 42 7.8	.9524203	9 21.4
12	13 53 49.92	8 44 1.7	.9424609	12 30.0	28	13 41 53.98	7 41 15.5	.9529360	9 17.3
13	13 53 32.79	8 42 24.6	.9423643	12 25.8	29	13 41 42.90	7 40 25.0	.9534619	9 13.2
14	13 53 15.60	8 40 47.5	.9422828	12 21.6	30	13 41 32.12	7 39 36.4	.9539978	9 9.1
15	13 52 58.36	8 39 10.4	.9422165	12 17.4	31	13 41 21.63	7 38 49.7	.9545435	9 5.0
16	13 52 41.08	8 37 33.4	.9421653	12 13.1	June 1	13 41 11.45	7 38 5.0	.9550987	9 0.9
17	13 52 23.78	8 35 56.4	.9421292	12 8.9	2	13 41 1.58	7 37 22.2	.9556631	8 56.8
18	13 52 6.45	8 34 19.7	.9421082	12 4.7	3	13 40 52.03	7 36 41.5	.9562366	8 52.7
19	13 51 49.11	8 32 43.2	.9421021	12 0.5	4	13 40 42.79	7 36 2.7	.9568189	8 48.6
20	13 51 31.76	8 31 7.0	.9421109	11 56.2	5	13 40 33.88	7 35 25.9	.9574098	8 44.5
21	13 51 14.41	8 29 31.1	.9421348	11 52.0	6	13 40 25.30	7 34 51.2	.9580091	8 40.5
22	13 50 57.08	8 27 55.6	.9421737	11 47.8	7	13 40 17.05	7 34 18.6	.9586166	8 36.4
23	13 50 39.77	8 26 20.5	.9422276	11 43.6	8	13 40 9.14	7 33 48.0	.9592320	8 32.3
24	13 50 22.49	8 24 45.8	.9422966	11 39.4	9	13 40 1.57	7 33 19.5	.9598550	8 28.3
25	13 50 5.26	8 23 11.6	.9423806	11 35.1	10	13 39 54.34	7 32 53.1	.9604853	8 24.2
26	13 49 48.07	8 21 38.0	.9424795	11 30.9	11	13 39 47.45	7 32 28.9	.9611227	8 20.2
27	13 49 30.94	8 20 5.0	.9425934	11 26.7	12	13 39 40.90	7 32 6.8	.9617670	8 16.2
28	13 49 13.87	8 18 32.7	.9427222	11 22.5	13	13 39 34.71	7 31 46.8	.9624178	8 12.1
29	13 48 56.87	8 17 1.0	.9428658	11 18.3	14	13 39 28.87	7 31 29.0	.9630750	8 8.1
30	13 48 39.96	8 15 30.1	.9430241	11 14.1	15	13 39 23.38	7 31 13.3	.9637384	8 4.1
May 1	13 48 23.14	8 14 0.0	.9431971	11 9.9	16	13 39 18.24	7 30 59.7	.9644077	8 0.0
2	13 48 6.43	8 12 30.8	.9433847	11 5.7	17	13 39 13.45	7 30 48.3	.9650822	7 56.0
3	13 47 49.83	8 11 2.5	.9435867	11 1.5	18	13 39 9.02	7 30 39.1	.9657633	7 52.0
4	13 47 33.35	8 9 35.2	.9438032	10 57.3	19	13 39 4.95	7 30 32.0	.9664491	7 48.0
5	13 47 16.99	8 8 8.9	.9440341	10 53.1	20	13 39 1.23	7 30 27.1	.9671400	7 44.0
6	13 47 0.77	8 6 43.6	.9442792	10 48.9	21	13 38 57.88	7 30 24.4	.9678357	7 40.1
7	13 46 44.70	8 5 19.3	.9445384	10 44.7	22	13 38 54.90	7 30 23.9	.9685360	7 36.1
8	13 46 28.78	8 3 56.3	.9448114	10 40.5	23	13 38 52.28	7 30 25.5	.9692408	7 32.1
9	13 46 13.02	8 2 34.4	.9450982	10 36.3	24	13 38 50.03	7 30 29.4	.9699497	7 28.2
10	13 45 57.44	8 1 13.8	.9453986	10 32.1	25	13 38 48.15	7 30 35.4	.9706625	7 24.2
11	13 45 42.04	7 59 54.5	.9457124	10 27.9	26	13 38 46.64	7 30 43.6	.9713791	7 20.2
12	13 45 26.82	7 58 36.5	.9460395	10 23.7	27	13 38 45.50	7 30 54.0	.9720992	7 16.3
13	13 45 11.80	7 57 19.9	.9463797	10 19.5	28	13 38 44.72	7 31 6.6	.9728227	7 12.3
14	13 44 56.98	7 56 4.6	.9467329	10 15.4	29	13 38 44.32	7 31 21.3	.9735492	7 8.4
15	13 44 42.36	7 54 50.7	.9470988	10 11.2	30	13 38 44.29	7 31 38.3	.9742785	7 4.5
16	13 44 27.96	7 53 38.3	.9474773	10 7.0	July 1	13 38 44.64	7 31 57.4	.9750104	7 0.6
17	13 44 13.78	7 52 27.4	.9478681	10 2.9	2	13 38 45.36	7 32 18.8	.9757447	6 56.6
18	13 43 59.82	S. 7 51 18.0	0.9482711	9 58.7	3	13 38 46.45	S. 7 32 42.3	0.9764811	6 52.7

		Hor. Par.	Polar Semidiameter.			Hor. Par.	Polar Semidiameter.
April	10	1.00	8.51	May	30	0.98	8.29
	20	1.00	8.52	June	9	0.96	8.18
	30	1.00	8.50		19	0.95	8.06
May	10	1.00	8.45		29	0.93	7.93
	20	0.99	8.39	July	9	0.92	7.79

Mean Noon.	Apparent Right Ascension.	Apparent Declination.	Log. of True Dist. from the Earth.	Merid. Passage.	Mean Noon.	Apparent Right Ascension.	Apparent Declination.	Log. of True Dist. from the Earth.	Merid. Passage.
	h m s	° ' "		h m		h m s	° ' "		h m
July 3	13 38 46.45	S. 7 32 42.3	0.9764811	6 52.7	Aug. 18	13 45 59.41	S. 8 26 15.8	1.0091964	3 59.1
4	13 38 47.92	7 33 8.0	.9772193	6 48.8	19	13 46 16.37	8 28 5.4	.0098186	3 55.4
5	13 38 49.76	7 33 35.8	.9779591	6 44.9	20	13 46 33.60	8 29 56.3	.0104348	3 51.8
6	13 38 51.97	7 34 5.8	.9787002	6 41.0	21	13 46 51.12	8 31 48.5	.0110449	3 48.2
7	13 38 54.56	7 34 38.0	.9794426	6 37.1	22	13 47 8.91	8 33 42.1	.0116487	3 44.5
8	13 38 57.52	7 35 12.3	.9801860	6 33.3	23	13 47 26.97	8 35 37.0	.0122461	3 40.9
9	13 39 0.85	7 35 48.7	.9809301	6 29.4	24	13 47 45.30	8 37 33.2	.0128371	3 37.3
10	13 39 4.55	7 36 27.2	.9816748	6 25.5	25	13 48 3.89	8 39 30.6	.0134215	3 33.6
11	13 39 8.62	7 37 7.9	.9824198	6 21.6	26	13 48 22.75	8 41 29.3	.0139991	3 30.0
12	13 39 13.06	7 37 50.6	.9831649	6 17.8	27	13 48 41.86	8 43 29.1	.0145699	3 26.4
13	13 39 17.86	7 38 35.4	.9839099	6 13.9	28	13 49 1.22	8 45 30.0	.0151338	3 22.8
14	13 39 23.02	7 39 22.3	.9846546	6 10.1	29	13 49 20.84	8 47 32.2	.0156905	3 19.2
15	13 39 28.54	7 40 11.2	.9853988	6 6.3	30	13 49 40.71	8 49 35.5	.0162401	3 15.6
16	13 39 34.43	7 41 2.1	.9861424	6 2.4	31	13 50 0.82	8 51 39.8	.0167824	3 12.0
17	13 39 40.67	7 41 55.1	.9868852	5 58.6	Sept. 1	13 50 21.17	8 53 45.2	.0173172	3 8.4
18	13 39 47.27	7 42 50.0	.9876270	5 54.8	2	13 50 41.76	8 55 51.7	.0178445	3 4.8
19	13 39 54.23	7 43 46.9	.9883676	5 51.0	3	13 51 2.59	8 57 59.2	.0183642	3 1.2
20	13 40 1.54	7 44 45.8	.9891070	5 47.2	4	13 51 23.64	9 0 7.7	.0188762	2 57.6
21	13 40 9.21	7 45 46.7	.9898449	5 43.4	5	13 51 44.92	9 2 17.1	.0193804	2 54.1
22	13 40 17.23	7 46 49.5	.9905812	5 39.6	6	13 52 6.42	9 4 27.5	.0198766	2 50.5
23	13 40 25.59	7 47 54.2	.9913156	5 35.8	7	13 52 28.13	9 6 38.8	.0203649	2 46.9
24	13 40 34.31	7 49 0.9	.9920480	5 32.0	8	13 52 50.06	9 8 51.0	.0208451	2 43.4
25	13 40 43.38	7 50 9.4	.9927781	5 28.2	9	13 53 12.19	9 11 4.0	.0213172	2 39.8
26	13 40 52.79	7 51 19.8	.9935058	5 24.4	10	13 53 34.53	9 13 17.9	.0217812	2 36.2
27	13 41 2.55	7 52 32.1	.9942309	5 20.7	11	13 53 57.07	9 15 32.6	.0222370	2 32.7
28	13 41 12.65	7 53 46.3	.9949533	5 16.9	12	13 54 19.81	9 17 48.0	.0226845	2 29.1
29	13 41 23.09	7 55 2.3	.9956727	5 13.1	13	13 54 42.75	9 20 4.2	.0231237	2 25.6
30	13 41 33.87	7 56 20.1	.9963891	5 9.4	14	13 55 5.88	9 22 21.2	.0235545	2 22.0
31	13 41 44.99	7 57 39.7	.9971022	5 5.6	15	13 55 29.20	9 24 38.9	.0239768	2 18.5
Aug. 1	13 41 56.44	7 59 1.1	.9978118	5 1.9	16	13 55 52.71	9 26 57.2	.0243906	2 14.9
2	13 42 8.23	8 0 24.3	.99855178	4 58.2	17	13 56 16.40	9 29 16.2	.0247957	2 11.4
3	13 42 20.34	8 1 49.2	.9992199	4 54.4	18	13 56 40.27	9 31 35.9	.0251922	2 7.9
4	13 42 32.77	8 3 15.9	.9999181	4 50.7	19	13 57 4.31	9 33 56.2	.0255799	2 4.3
5	13 42 45.53	8 4 44.2	1.0006122	4 47.0	20	13 57 28.53	9 36 17.1	.0259588	2 0.8
6	13 42 58.61	8 6 14.1	.0013020	4 43.3	21	13 57 52.91	9 38 38.5	.0263288	1 57.3
7	13 43 12.01	8 7 45.7	.0019873	4 39.6	22	13 58 17.46	9 41 0.5	.0266899	1 53.7
8	13 43 25.72	8 9 19.0	.0026681	4 35.9	23	13 58 42.18	9 43 23.1	.0270420	1 50.2
9	13 43 39.74	8 10 53.8	.0033442	4 32.1	24	13 59 7.05	9 45 46.1	.0273849	1 46.7
10	13 43 54.07	8 12 30.3	.0040154	4 28.4	25	13 59 32.08	9 48 9.6	.0277186	1 43.2
11	13 44 8.71	8 14 8.3	.0046816	4 24.8	26	13 59 57.26	9 50 33.6	.0280429	1 39.7
12	13 44 23.64	8 15 47.8	.0053427	4 21.1	27	14 0 22.58	9 52 58.0	.0283579	1 36.2
13	13 44 38.87	8 17 28.8	.0059987	4 17.4	28	14 0 48.04	9 55 22.8	.0286635	1 32.6
14	13 44 54.40	8 19 11.3	.0066494	4 13.7	29	14 1 13.64	9 57 47.9	.0289595	1 29.1
15	13 45 10.22	8 20 55.3	.0072946	4 10.1	30	14 1 39.38	10 0 13.4	.0292462	1 25.6
16	13 45 26.33	8 22 40.8	.0079343	4 6.4	Oct. 1	14 2 5.25	10 2 39.3	.0295233	1 22.1
17	13 45 42.73	8 24 27.6	.0085683	4 2.8	2	14 2 31.24	10 5 5.4	.0297909	1 18.6
18	13 45 59.41	S. 8 26 15.8	1.0091964	3 59.1	3	14 2 57.35	S. 10 7 31.7	1.0300489	1 15.1

		Hor. Par.	Polar Semidiameter.			Hor. Par.	Polar Semidiameter.
July	19	0.90	7.66	September	7	0.84	7.12
	29	0.89	7.53		17	0.83	7.04
August	8	0.87	7.41		27	0.82	6.98
	18	0.86	7.30	October	7	0.82	6.94
	28	0.85	7.20		17	0.82	6.92

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Mean Noon.	Apparent Right Ascension.	Apparent Declination.	Log. of True Dist. from the Earth.	Merid. Passage	Mean Noon.	Apparent Right Ascension.	Apparent Declination.	Log. of True Dist. from the Earth.	Merid. Passage
	h m s	° ' "		h m		h m s	° ' "		h m
Oct. 3	14 2 57.35	S. 10 7 31.7	1.0300489	1 15.1	Nov. 18	14 23 58.75	S. 11 57 34.8	1.0310851	22 31.7
4	14 3 23.58	10 9 58.3	.0302972	1 11.6	19	14 24 25.89	11 59 46.9	.0308687	22 28.2
5	14 3 49.92	10 12 25.1	.0305359	1 8.1	20	14 24 52.94	12 1 58.1	.0306422	22 24.7
6	14 4 16.37	10 14 52.1	.0307647	1 4.7	21	14 25 19.91	12 4 8.5	.0304058	22 21.2
7	14 4 42.92	10 17 19.2	.0309838	1 1.2	22	14 25 46.79	12 6 18.0	.0301594	22 17.8
8	14 5 9.57	10 19 46.5	.0311932	0 57.7	23	14 26 13.58	12 8 26.6	.0299030	22 14.3
9	14 5 36.31	10 22 14.0	.0313927	0 54.2	24	14 26 40.27	12 10 34.3	.0296367	22 10.8
10	14 6 3.15	10 24 41.5	.0315824	0 50.7	25	14 27 6.85	12 12 41.0	.0293604	22 7.3
11	14 6 30.08	10 27 9.0	.0317622	0 47.2	26	14 27 33.31	12 14 46.8	.0290742	22 3.8
12	14 6 57.09	10 29 36.6	.0319321	0 43.7	27	14 27 59.66	12 16 51.6	.0287781	22 0.3
13	14 7 24.19	10 32 4.3	.0320921	0 40.2	28	14 28 25.89	12 18 55.4	.0284722	21 56.8
14	14 7 51.36	10 34 31.9	.0322421	0 36.8	29	14 28 51.99	12 20 58.1	.0281566	21 53.3
15	14 8 18.61	10 36 59.4	.0323822	0 33.3	30	14 29 17.96	12 22 59.8	.0278314	21 49.8
16	14 8 45.92	10 39 26.9	.0325124	0 29.8	Dec. 1	14 29 43.80	12 25 0.4	.0274966	21 46.3
17	14 9 13.30	10 41 54.3	.0326326	0 26.3	2	14 30 9.49	12 26 59.9	.0271523	21 42.8
18	14 9 40.74	10 44 21.7	.0327427	0 22.9	3	14 30 35.04	12 28 58.3	.0267985	21 39.3
19	14 10 8.24	10 46 49.0	.0328428	0 19.4	4	14 31 0.44	12 30 55.6	.0264332	21 35.8
20	14 10 35.80	10 49 16.1	.0329328	0 15.9	5	14 31 25.68	12 32 51.7	.0260626	21 32.2
21	14 11 3.41	10 51 43.0	.0330126	0 12.4	6	14 31 50.76	12 34 46.7	.0256807	21 28.7
22	14 11 31.06	10 54 9.8	.0330822	0 8.9	7	14 32 15.68	12 36 40.5	.0252897	21 25.2
23	14 11 58.75	10 56 36.4	.0331417	0 5.5	8	14 32 40.44	12 38 33.2	.0248896	21 21.7
24	14 12 26.48	10 59 2.7	.0331909	$\left\{ \begin{smallmatrix} 0 & 2.0 \\ 23 & 58.5 \end{smallmatrix} \right\}$	9	14 33 5.02	12 40 24.6	.0244804	21 18.1
25	14 12 54.25	11 1 28.8	.0332298	23 55.1	10	14 33 29.43	12 42 14.8	.0240623	21 14.6
26	14 13 22.04	11 3 54.6	.0332584	23 51.6	11	14 33 53.66	12 44 3.7	.0236352	21 11.1
27	14 13 49.86	11 6 20.1	.0332766	23 48.1	12	14 34 17.70	12 45 51.4	.0231991	21 7.5
28	14 14 17.70	11 8 45.3	.0332846	23 44.6	13	14 34 41.55	12 47 37.8	.0227542	21 4.0
29	14 14 45.55	11 11 10.1	.0332822	23 41.2	14	14 35 5.21	12 49 22.9	.0223006	21 0.5
30	14 15 13.41	11 13 34.5	.0332695	23 37.7	15	14 35 28.68	12 51 6.7	.0218383	20 56.9
31	14 15 41.28	11 15 58.5	.0332465	23 34.2	16	14 35 51.94	12 52 49.2	.0213674	20 53.4
Nov. 1	14 16 9.15	11 18 22.0	.0332133	23 30.8	17	14 36 15.00	12 54 30.4	.0208880	20 49.8
2	14 16 37.01	11 20 45.1	.0331698	23 27.3	18	14 36 37.84	12 56 10.2	.0204001	20 46.3
3	14 17 4.87	11 23 7.7	.0331161	23 23.8	19	14 37 0.46	12 57 48.6	.0199040	20 42.7
4	14 17 32.71	11 25 29.8	.0330521	23 20.4	20	14 37 22.86	12 59 25.7	.0193997	20 39.1
5	14 18 0.54	11 27 51.4	.0329778	23 16.9	21	14 37 45.03	13 1 1.3	.0188872	20 35.6
6	14 18 28.34	11 30 12.5	.0328933	23 13.4	22	14 38 6.97	13 2 35.5	.0183666	20 32.0
7	14 18 56.12	11 32 33.0	.0327985	23 9.9	23	14 38 28.67	13 4 8.3	.0178378	20 28.4
8	14 19 23.86	11 34 52.9	.0326934	23 6.5	24	14 38 50.14	13 5 39.6	.0173011	20 24.9
9	14 19 51.57	11 37 12.2	.0325782	23 3.0	25	14 39 11.36	13 7 9.5	.0167565	20 21.3
10	14 20 19.24	11 39 30.8	.0324528	22 59.5	26	14 39 32.32	13 8 37.9	.0162041	20 17.7
11	14 20 46.87	11 41 48.8	.0323172	22 56.1	27	14 39 53.03	13 10 4.8	.0156442	20 14.1
12	14 21 14.45	11 44 6.1	.0321715	22 52.6	28	14 40 13.47	13 11 30.1	.0150769	20 10.5
13	14 21 41.99	11 46 22.7	.0320157	22 49.1	29	14 40 33.65	13 12 53.9	.0145022	20 6.9
14	14 22 9.47	11 48 38.6	.0318498	22 45.6	30	14 40 53.56	13 14 16.1	.0139203	20 3.3
15	14 22 36.89	11 50 53.8	.0316738	22 42.1	31	14 41 13.19	13 15 36.8	.0133315	19 59.7
16	14 23 4.24	11 53 8.3	.0314877	22 38.7	32	14 41 32.55	S. 13 16 55.9	1.0127357	19 56.1
17	14 23 31.53	11 55 22.0	.0312914	22 35.2					
18	14 23 58.75	S. 11 57 34.8	1.0310851	22 31.7					

		Hor. Par.	Polar Semidiameter.			Hor. Par.	Polar Semidiameter.
October	27	0.81	6.91	December	6	0.83	7.02
November	6	0.82	6.91		16	0.84	7.10
	16	0.82	6.94		26	0.85	7.18
	26	0.82	6.97		36	0.86	7.28

Mean Noon.	Apparent Light Ascension.	Apparent Declination.	Log. of True Dist. from the Earth.	Merid. Passage.	Mean Noon.	Apparent Light Ascension.	Apparent Declination.	Log. of True Dist. from the Earth.	Merid. Passage.
1923-24	h m s	° ' "		h m		h m s	° ' "		h m
Dec. 30	23 2 56.72	S. 6 55 12.2	1.3110510	4 30.6	July 1	23 30 1.10	S. 4 5 21.8	1.2958155	16 50.2
Jan. 3	23 3 24.62	6 52 9.3	1.3123755	4 15.4	5	23 29 56.38	4 6 1.8	1.2944300	16 34.4
7	23 3 55.07	6 48 50.9	1.3136504	4 0.2	9	23 29 48.86	4 6 59.5	1.2930778	16 18.5
11	23 4 27.94	6 45 17.5	1.3148701	3 45.0	13	23 29 38.62	4 8 14.4	1.2917659	16 2.6
15	23 5 3.10	6 41 30.2	1.3160290	3 29.8	17	23 29 25.73	4 9 46.0	1.2905003	15 46.7
19	23 5 40.39	6 37 29.9	1.3171233	3 14.7	21	23 29 10.26	4 11 33.8	1.2892868	15 30.7
23	23 6 19.68	S. 6 33 17.2	1.3181486	2 59.6	25	23 28 52.32	S. 4 13 37.1	1.2881317	15 14.7
27	23 7 0.82	6 28 53.1	1.3191015	2 44.6	29	23 28 31.98	4 15 55.3	1.2870418	14 58.6
31	23 7 43.67	6 24 18.7	1.3199785	2 29.6	Aug. 2	23 28 9.37	4 18 27.4	1.2860233	14 42.5
Feb. 4	23 8 28.09	6 19 34.7	1.3207759	2 14.6	6	23 27 44.66	4 21 12.5	1.2850822	14 26.3
8	23 9 13.90	6 14 42.2	1.3214905	1 59.6	10	23 27 18.00	4 24 9.5	1.2842237	14 10.1
12	23 10 0.94	6 9 42.4	1.3221197	1 44.7	14	23 26 49.55	4 27 17.1	1.2834527	13 53.9
16	23 10 49.01	S. 6 4 36.2	1.3226616	1 29.7	18	23 26 19.51	S. 4 30 34.3	1.2827731	13 37.7
20	23 11 37.96	5 59 24.8	1.3231146	1 14.8	22	23 25 48.05	4 33 59.9	1.2821892	13 21.5
24	23 12 27.62	5 54 9.1	1.3234789	0 59.9	26	23 25 15.35	4 37 32.4	1.2817046	13 5.2
28	23 13 17.84	5 48 50.2	1.3237516	0 45.0	30	23 24 41.62	4 41 10.7	1.2813231	12 48.9
Mar. 3	23 14 8.44	5 43 29.2	1.3239328	0 30.1	Sept. 3	23 24 7.11	4 44 53.0	1.2810475	12 32.6
7	23 14 59.26	5 38 7.1	1.3240212	0 15.3	7	23 23 32.05	4 48 38.1	1.2808799	12 16.3
11	23 15 50.11	S. 5 32 45.1	1.3240170	{ 0 0.4 }	11	23 22 56.68	S. 4 52 24.2	1.2808207	12 0.0
15	23 16 40.82	5 27 24.2	1.3239207	23 41.8	15	23 22 21.22	4 56 9.9	1.2808704	11 43.7
19	23 17 31.21	5 22 5.6	1.3237334	23 26.9	19	23 21 45.90	4 59 53.8	1.2810290	11 27.4
23	23 18 21.14	5 16 50.2	1.3234565	23 11.9	23	23 21 10.95	5 3 34.4	1.2812966	11 11.1
27	23 19 10.44	5 11 39.1	1.3230905	22 57.0	27	23 20 36.60	5 7 10.1	1.2816720	10 54.8
31	23 19 58.99	5 6 33.2	1.3226371	22 42.1	Oct. 1	23 20 3.10	5 10 39.7	1.2821535	10 38.5
Apr. 4	23 20 46.60	S. 5 1 33.5	1.3220979	22 27.2	5	23 19 30.71	S. 5 14 1.2	1.2827384	10 22.2
8	23 21 33.10	4 56 41.2	1.3214746	22 12.2	9	23 18 59.65	5 17 13.6	1.2834235	10 6.0
12	23 22 18.35	4 51 57.1	1.3207703	21 57.2	13	23 18 30.11	5 20 15.5	1.2842039	9 49.8
16	23 23 2.21	4 47 22.3	1.3199880	21 42.2	17	23 18 2.29	5 23 5.6	1.2850760	9 33.6
20	23 23 44.52	4 42 57.6	1.3191311	21 27.2	21	23 17 36.37	5 25 43.0	1.2860352	9 17.4
24	23 24 25.19	4 38 43.7	1.3182027	21 12.1	25	23 17 12.53	5 28 6.5	1.2870762	9 1.3
28	23 25 4.08	S. 4 34 41.6	1.3172056	20 57.0	29	23 16 50.98	S. 5 30 15.0	1.2881941	8 45.2
May 2	23 25 41.05	4 30 52.0	1.3161439	20 41.9	Nov. 2	23 16 31.86	5 32 7.5	1.2893818	8 29.2
6	23 26 15.98	4 27 15.8	1.3150209	20 26.8	6	23 16 15.30	5 33 43.2	1.2906324	8 13.2
10	23 26 48.73	4 23 53.8	1.3138419	20 11.6	10	23 16 1.44	5 35 1.5	1.2919392	7 57.2
14	23 27 19.21	4 20 46.6	1.3126119	19 56.3	14	23 15 50.34	5 36 2.0	1.2932949	7 41.3
18	23 27 47.33	4 17 54.8	1.3113359	19 41.1	18	23 15 42.10	5 36 44.0	1.2946928	7 25.5
22	23 28 13.02	S. 4 15 18.8	1.3100185	19 25.8	22	23 15 36.79	S. 5 37 7.2	1.2961259	7 9.7
26	23 28 36.18	4 12 59.4	1.3086645	19 10.4	26	23 15 34.49	5 37 11.3	1.2975869	6 53.9
30	23 28 56.73	4 10 56.8	1.3072794	18 55.0	30	23 15 35.23	5 36 56.1	1.2990676	6 38.2
June 3	23 29 14.60	4 9 11.7	1.3058689	18 39.6	Dec. 4	23 15 39.03	5 36 21.4	1.3005606	6 22.5
7	23 29 29.71	4 7 44.3	1.3044393	18 24.1	8	23 15 45.88	5 35 27.3	1.3020578	6 6.9
11	23 29 42.02	4 6 35.0	1.3029971	18 8.6	12	23 15 55.75	5 34 14.2	1.3035522	5 51.3
15	23 29 51.53	S. 4 5 43.9	1.3015491	17 53.0	16	23 16 8.62	S. 5 32 42.1	1.3050372	5 35.8
19	23 29 58.20	4 5 10.9	1.3001002	17 37.4	20	23 16 24.44	5 30 51.5	1.3065061	5 20.4
23	23 30 2.03	4 4 56.3	1.2986575	17 21.7	24	23 16 43.18	5 28 42.6	1.3079518	5 5.0
27	23 30 2.99	4 4 59.9	1.2972266	17 6.0	28	23 17 4.77	5 26 15.7	1.3093677	4 49.6
July 1	23 30 1.10	S. 4 5 21.8	1.2958155	16 50.2	32	23 17 29.12	S. 5 23 31.6	1.3107467	4 34.3

Mean Noon.	Apparent Right Ascension.	Apparent Declination.	Log. of True Dist. from the Earth.	Merid. Passage	Mean Noon.	Apparent Right Ascension.	Apparent Declination.	Log. of True Dist. from the Earth.	Merid. Passage
1923-24	h m s	° ' "		h m	1923-24	h m s	° ' "		h m
Dec. 30	9 30 3.35	N. 15 2 47.8	1.4676553	14 56.0	July 1	9 24 36.63	N. 15 30 3.9	1.4895650	2 47.1
Jan. 3	9 29 44.68	15 4 22.0	.4669923	14 39.9	5	9 25 5.74	15 27 48.0	.4901409	2 31.9
7	9 29 24.54	15 6 3.1	.4663864	14 23.8	9	9 25 35.93	15 25 26.8	.4906655	2 16.7
11	9 29 3.06	15 7 50.5	.4658414	14 7.7	13	9 26 7.11	15 23 0.8	.4911373	2 1.5
15	9 28 40.40	15 9 43.1	.4653601	13 51.6	17	9 26 39.15	15 20 30.4	.4915541	1 46.3
19	9 28 16.70	15 11 40.5	.4649454	13 35.5	21	9 27 11.96	15 17 56.2	.4919150	1 31.1
23	9 27 52.12	N. 15 13 41.7	1.4645993	13 19.4	25	9 27 45.43	N. 15 15 18.6	1.4922189	1 15.9
27	9 27 26.82	15 15 46.0	.4643235	13 3.2	29	9 28 19.45	15 12 38.1	.4924635	1 0.7
31	9 27 0.94	15 17 52.7	.4641196	12 47.1	Aug. 2	9 28 53.90	15 9 55.4	.4926482	0 45.6
Feb. 4	9 26 34.66	15 20 0.9	.4639803	12 30.9	6	9 29 28.66	15 7 11.0	.4927719	0 30.4
8	9 26 8.16	15 22 9.7	.4639333	12 14.7	10	9 30 3.60	15 4 25.3	.4928346	0 15.3
12	9 25 41.62	15 24 18.4	.4639519	11 58.6	14	9 30 38.61	15 1 39.1	.4928358	{ 0 0.1 23 56.3 }
16	9 25 15.22	N. 15 26 25.9	1.1640441	11 42.4	18	9 31 13.56	N. 14 58 52.9	1.4927757	23 41.2
20	9 24 49.13	15 28 31.7	.4642094	11 26.3	22	9 31 48.37	14 56 7.2	.4926545	23 26.0
24	9 24 23.50	15 30 34.8	.4644463	11 10.1	26	9 32 22.89	14 53 22.6	.4924722	23 10.9
28	9 23 58.50	15 32 34.6	.4647535	10 54.0	30	9 32 57.02	14 50 39.7	.4922286	22 55.7
Mar. 3	9 23 34.28	15 34 30.4	.4651293	10 37.8	Sept. 3	9 33 30.62	14 47 59.1	.4919248	22 40.6
7	9 23 11.01	15 36 21.3	.4655719	10 21.7	7	9 34 3.58	14 45 21.5	.4915623	22 25.4
11	9 22 48.84	N. 15 38 6.8	1.4660780	10 5.6	11	9 34 35.76	N. 14 42 47.4	1.4911418	22 10.2
15	9 22 27.92	15 39 46.1	.4666445	9 49.6	15	9 35 7.08	14 40 17.4	.4906654	21 54.9
19	9 22 8.36	15 41 18.8	.4672680	9 33.5	19	9 35 37.42	14 37 52.1	.4901346	21 39.7
23	9 21 50.28	15 42 44.4	.4679440	9 17.5	23	9 36 6.68	14 35 31.9	.4895508	21 24.5
27	9 21 33.79	15 44 2.3	.4686699	9 1.5	27	9 36 34.74	14 33 17.5	.4889160	21 9.2
31	9 21 18.98	15 45 12.1	.4694413	8 45.5	Oct. 1	9 37 1.49	14 31 9.6	.4882327	20 43.9
Apr. 4	9 21 5.96	N. 15 46 13.5	1.4702542	8 29.6	5	9 37 26.83	N. 14 29 8.4	1.4875034	20 38.6
8	9 20 54.79	15 47 6.2	.4711043	8 13.7	9	9 37 50.64	14 27 14.8	.4867317	20 23.3
12	9 20 45.57	15 47 49.7	.4719867	7 57.8	13	9 38 12.87	14 25 29.0	.4859203	20 7.9
16	9 20 38.34	15 48 23.9	.4728964	7 42.0	17	9 38 33.42	14 23 51.5	.4850724	19 52.5
20	9 20 33.12	15 48 48.6	.4738290	7 26.2	21	9 38 52.21	14 22 22.7	.4841916	19 37.1
24	9 20 29.96	15 49 3.9	.4747800	7 10.4	25	9 39 9.17	14 21 3.1	.4832808	19 21.7
28	9 20 28.86	N. 15 49 9.4	1.4757451	6 54.6	29	9 39 24.21	N. 14 19 53.1	1.4823447	19 6.2
May 2	9 20 29.86	15 49 5.3	.4767198	6 38.9	Nov. 2	9 39 37.27	14 18 52.9	.4813871	18 50.7
6	9 20 32.97	15 48 51.4	.4776989	6 23.2	6	9 39 48.30	14 18 3.0	.4804130	18 35.1
10	9 20 38.17	15 48 27.8	.4786781	6 7.6	10	9 39 57.26	14 17 23.3	.4794265	18 19.5
14	9 20 45.44	15 47 54.6	.4796525	5 52.0	14	9 40 4.13	14 16 54.3	.4784323	18 3.9
18	9 20 54.75	15 47 11.9	.4806178	5 36.4	18	9 40 8.89	14 16 35.8	.4774347	17 48.2
22	9 21 6.05	N. 15 46 20.0	1.4815702	5 20.9	22	9 40 11.50	N. 14 16 28.2	1.4764386	17 32.5
26	9 21 19.31	15 45 19.0	.4825062	5 5.4	26	9 40 11.95	14 16 31.3	.4754488	17 16.8
30	9 21 34.49	15 44 9.0	.4834211	4 49.9	30	9 40 10.24	14 16 45.2	.4744708	17 1.1
June 3	9 21 51.53	15 42 50.4	.4843115	4 34.5	Dec. 4	9 40 6.41	14 17 9.8	.4735098	16 45.3
7	9 22 10.37	15 41 23.3	.4851732	4 19.1	8	9 40 0.49	14 17 44.8	.4725709	16 29.4
11	9 22 30.93	15 39 48.2	.4860029	4 3.7	12	9 39 52.52	14 18 30.1	.4716585	16 13.6
15	9 22 53.13	N. 15 38 5.3	1.4867971	3 48.3	16	9 39 42.56	N. 14 19 25.2	1.4707775	15 57.7
19	9 23 16.88	15 36 15.1	.4875532	3 33.0	20	9 39 30.67	14 20 29.9	.4699326	15 41.7
23	9 23 42.10	15 34 17.9	.4882683	3 17.7	24	9 39 16.91	14 21 43.7	.4691284	15 25.8
27	9 24 8.72	15 32 14.1	.4889397	3 2.4	28	9 39 1.36	14 23 6.3	.4683700	15 9.8
July 1	9 24 36.63	N. 15 30 3.9	1.4895650	2 47.1	32	9 38 44.14	N. 14 24 37.1	1.4676617	14 53.7

AT TRANSIT AT GREENWICH.

Date.	Apparent Right Ascension.	Sid. Time of Semid. pass* Merid	Apparent Declination.	Semidiameter.	Hor. Par.	Date.	Apparent Right Ascension.	Sid. Time of Semid. pass* Merid	Apparent Declination.	Semidiameter.	Hor. Par.
	h m s	s	° ' "	"	"		h m s	s	° ' "	"	"
Jan. 1	20 42 34.63	0.42	S. 19 59 56.5	5.88	6.15	Feb. 16	0 16 2.72	0.47	N. 1 8 9.6	7.10	7.43
2	20 47 40.40	0.42	19 40 36.7	5.90	6.17	17	0 20 22.12	0.47	1 39 41.2	7.14	7.47
3	20 52 44.79	0.42	19 20 43.5	5.92	6.19	18	0 24 41.24	0.48	2 11 10.9	7.18	7.51
4	20 57 47.81	0.42	19 0 17.6	5.94	6.21	19	0 29 0.13	0.48	2 42 37.9	7.22	7.55
5	21 2 49.43	0.42	18 39 19.8	5.95	6.23	20	0 33 18.82	0.49	3 14 1.6	7.25	7.59
6	21 7 49.66	0.42	18 17 50.8	5.97	6.25	21	0 37 37.34	0.49	3 45 21.3	7.29	7.64
7	21 12 48.49	0.42	S. 17 55 51.5	5.99	6.27	22	0 41 55.73	0.49	N. 4 16 36.3	7.34	7.68
8	21 17 45.90	0.42	17 33 22.6	6.01	6.29	23	0 46 14.04	0.49	4 47 45.9	7.38	7.73
9	21 22 41.92	0.42	17 10 24.9	6.03	6.31	24	0 50 32.29	0.50	5 18 49.4	7.43	7.77
10	21 27 36.53	0.42	16 46 59.1	6.05	6.33	25	0 54 50.52	0.50	5 49 46.1	7.47	7.82
11	21 32 29.74	0.42	16 23 6.1	6.07	6.35	26	0 59 8.76	0.50	6 20 35.3	7.51	7.86
12	21 37 21.56	0.42	15 58 46.7	6.09	6.37	27	1 3 27.05	0.50	6 51 16.5	7.56	7.91
13	21 42 11.99	0.42	S. 15 34 1.7	6.12	6.40	28	1 7 45.43	0.51	N. 7 21 48.8	7.60	7.95
14	21 47 1.05	0.42	15 8 51.8	6.14	6.42	29	1 12 3.92	0.51	7 52 11.7	7.65	8.00
15	21 51 48.76	0.43	14 43 17.9	6.16	6.45	Mar. 1	1 16 22.55	0.52	8 22 24.3	7.69	8.05
16	21 56 35.12	0.43	14 17 20.8	6.19	6.47	2	1 20 41.35	0.52	8 52 26.1	7.74	8.10
17	22 1 20.16	0.43	13 51 1.3	6.21	6.50	3	1 25 0.35	0.53	9 22 16.3	7.79	8.15
18	22 6 3.90	0.43	13 24 20.2	6.24	6.52	4	1 29 19.58	0.53	9 51 54.3	7.83	8.20
19	22 10 46.36	0.43	S. 12 57 18.2	6.27	6.55	5	1 33 39.04	0.53	N. 10 21 19.3	7.88	8.25
20	22 15 27.56	0.43	12 29 56.1	6.29	6.57	6	1 37 58.77	0.54	10 50 30.8	7.93	8.30
21	22 20 7.53	0.43	12 2 14.8	6.31	6.60	7	1 42 18.77	0.54	11 19 27.9	7.99	8.36
22	22 24 46.30	0.43	11 34 15.1	6.33	6.62	8	1 46 39.06	0.55	11 48 10.1	8.04	8.41
23	22 29 23.90	0.43	*11 5 57.7	6.35	6.65	9	1 50 59.67	0.55	12 16 36.6	8.09	8.47
24	22 34 0.35	0.43	10 37 23.5	6.38	6.68	10	1 55 20.60	0.55	12 44 46.7	8.15	8.52
25	22 38 35.69	0.43	S. 10 8 33.1	6.41	6.71	11	1 59 41.87	0.56	N. 13 12 39.7	8.20	8.58
26	22 43 9.96	0.44	9 39 27.4	6.43	6.73	12	2 4 3.50	0.56	13 40 15.0	8.26	8.64
27	22 47 43.19	0.44	9 10 7.1	6.46	6.76	13	2 8 25.48	0.57	14 7 31.9	8.31	8.70
28	22 52 15.41	0.44	8 40 33.0	6.49	6.79	14	2 12 47.82	0.57	14 34 29.7	8.37	8.76
29	22 56 46.65	0.44	8 10 45.8	6.52	6.82	15	2 17 10.53	0.58	15 1 7.8	8.43	8.82
30	23 1 16.97	0.44	7 40 46.3	6.55	6.85	16	2 21 33.61	0.58	15 27 25.4	8.49	8.88
31	23 5 46.38	0.44	S. 7 10 35.3	6.58	6.88	17	2 25 57.07	0.59	N. 15 53 22.1	8.55	8.95
Feb. 1	23 10 14.92	0.44	6 40 13.6	6.61	6.91	18	2 30 20.91	0.59	16 18 57.1	8.62	9.02
2	23 14 42.64	0.45	6 9 41.8	6.64	6.95	19	2 34 45.12	0.60	16 44 9.7	8.69	9.09
3	23 19 9.56	0.45	5 39 0.8	6.67	6.98	20	2 39 9.71	0.61	17 8 59.4	8.75	9.16
4	23 23 35.72	0.45	5 8 11.3	6.71	7.02	21	2 43 34.67	0.62	17 33 25.5	8.82	9.23
5	23 28 1.15	0.45	4 37 14.1	6.74	7.05	22	2 48 0.00	0.62	17 57 27.4	8.89	9.30
6	23 32 25.88	0.45	S. 4 6 10.0	6.77	7.08	23	2 52 25.69	0.63	N. 18 21 4.7	8.96	9.37
7	23 36 49.96	0.45	3 34 59.6	6.80	7.11	24	2 56 51.74	0.64	18 44 16.6	9.02	9.44
8	23 41 13.42	0.46	3 3 43.8	6.83	7.14	25	3 1 18.13	0.64	19 7 2.7	9.09	9.52
9	23 45 36.28	0.46	2 32 23.3	6.86	7.17	26	3 5 44.85	0.65	19 29 22.3	9.16	9.59
10	23 49 58.59	0.46	2 0 58.8	6.89	7.21	27	3 10 11.89	0.66	19 51 15.0	9.24	9.67
11	23 54 20.38	0.46	1 29 31.1	6.92	7.24	28	3 14 39.23	0.66	20 12 40.2	9.31	9.75
12	23 58 41.68	0.47	S. 0 58 1.0	6.96	7.28	29	3 19 6.84	0.67	N. 20 33 37.3	9.39	9.83
13	0 3 2.52	0.47	S. 0 26 29.1	6.99	7.32	30	3 23 34.71	0.68	20 54 6.0	9.47	9.91
14	0 7 22.96	0.47	N. 0 5 3.8	7.03	7.36	31	3 28 2.79	0.68	21 14 5.6	9.56	10.00
15	0 11 43.01	0.47	N. 0 36 37.0	7.07	7.40	Apr. 1	3 32 31.06	0.69	N. 21 33 35.9	9.64	10.09

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Date.	Apparent Right Ascension.	Sid. Time of Semid. pass- Merid	Apparent Declination.	Semidiameter.	Hor. Par.	Date.	Apparent Right Ascension.	Sid. Time of Semid. pass- Merid	Apparent Declination.	Semidiameter.	Hor. Par.
Apr. 2	h m s	s	° ' "	"	"	May 18	h m s	s	° ' "	"	"
3	3 36 59.47	0.70	N.21 52 36.2	9.73	10.18	19	6 42 13.11	1.24	N.26 37 45.8	16.67	17.44
4	3 41 27.98	0.71	22 11 6.1	9.81	10.27	20	6 45 2.79	1.26	26 32 21.1	16.92	17.70
5	3 45 56.56	0.72	22 29 5.2	9.90	10.36	21	6 47 46.79	1.28	26 26 35.3	17.17	17.97
6	3 50 25.13	0.73	22 46 33.1	9.99	10.45	22	6 50 24.92	1.30	26 20 45.9	17.44	18.25
7	3 54 53.65	0.73	23 3 29.3	10.08	10.55	23	6 52 56.97	1.32	26 14 4.3	17.71	18.53
8	3 59 22.06	0.74	23 19 53.5	10.17	10.65	24	6 55 22.74	1.34	26 7 20.8	17.99	18.82
9	4 3 50.31	0.75	N.23 35 45.3	10.27	10.75	25	6 57 42.01	1.36	N.26 0 19.6	18.27	19.12
10	4 8 18.32	0.76	23 51 4.4	10.37	10.85	26	6 59 54.58	1.38	25 53 1.5	18.56	19.42
11	4 12 46.02	0.77	24 5 50.4	10.47	10.96	27	7 2 0.22	1.40	25 45 27.4	18.86	19.73
12	4 17 13.34	0.77	24 20 3.2	10.57	11.06	28	7 3 58.70	1.42	25 37 38.3	19.16	20.05
13	4 21 40.22	0.78	24 33 42.3	10.68	11.17	29	7 5 49.79	1.44	25 29 34.9	19.47	20.37
14	4 26 6.56	0.79	24 46 47.6	10.79	11.28	30	7 7 33.25	1.46	25 21 18.0	19.78	20.70
15	4 30 32.28	0.80	N.24 59 18.9	10.90	11.40	June 1	7 9 8.84	1.48	N.25 12 48.3	20.11	21.04
16	4 34 57.30	0.81	25 11 16.0	11.01	11.52	2	7 10 36.31	1.50	25 4 6.7	20.43	21.38
17	4 39 21.53	0.82	25 22 38.7	11.12	11.64	3	7 11 55.42	1.53	24 55 13.9	20.77	21.73
18	4 43 44.88	0.83	25 33 26.9	11.24	11.76	4	7 13 5.92	1.55	24 46 10.8	21.10	22.08
19	4 48 7.25	0.84	25 43 40.6	11.36	11.89	5	7 14 7.57	1.57	24 36 57.9	21.45	22.44
20	4 52 28.56	0.85	25 53 19.5	11.48	12.02	6	7 15 0.14	1.60	24 27 36.1	21.79	22.80
21	4 56 48.71	0.86	N.26 2 23.8	11.61	12.15	7	7 15 43.40	1.62	N.24 18 5.9	22.15	23.18
22	5 1 7.59	0.87	26 10 53.4	11.74	12.28	8	7 16 17.12	1.64	24 8 27.8	22.52	23.56
23	5 5 25.12	0.88	26 18 48.5	11.87	12.42	9	7 16 41.09	1.67	23 58 42.2	22.87	23.93
24	5 9 41.20	0.89	26 26 9.0	12.00	12.56	10	7 16 55.13	1.69	23 48 49.9	23.23	24.31
25	5 13 55.71	0.91	26 32 55.1	12.14	12.70	11	7 16 59.05	1.72	23 38 51.3	23.60	24.69
26	5 18 8.55	0.92	26 39 7.0	12.28	12.85	12	7 16 52.71	1.74	23 28 46.7	23.96	25.07
27	5 22 19.61	0.93	N.26 44 44.9	12.42	13.00	13	7 16 35.98	1.77	N.23 18 36.5	24.32	25.45
28	5 26 28.78	0.94	26 49 48.9	12.57	13.15	14	7 16 8.79	1.79	23 8 21.1	24.69	25.83
29	5 30 35.93	0.95	26 54 19.2	12.72	13.31	15	7 15 31.11	1.81	22 58 0.6	25.05	26.21
30	5 34 40.93	0.96	26 58 16.3	12.87	13.47	16	7 14 42.94	1.84	22 47 35.3	25.40	26.58
May 1	5 38 43.67	0.98									

AT TRANSIT AT GREENWICH.

Date.	Apparent Right Ascension.	Sid. Time of Semi- pass- Merid.	Apparent Declination.	Semi- diameter.	Hor. Par.	Date.	Apparent Right Ascension.	Sid. Time of Semi- pass- Merid.	Apparent Declination.	Semi- diameter.	Hor. Par.
July 3	h m s	s	° ' "	"	"	Aug. 18	h m s	s	° ' "	"	"
4	6 31 45.39	2.04	N. 19 14 47.5	28.85	30.19	19	6 52 15.62	1.10	N. 18 22 23.1	15.64	16.37
5	6 29 11.35	2.03	19 5 21.5	28.75	30.08	20	6 55 22.00	1.09	18 23 33.3	15.43	16.15
6	6 26 41.54	2.02	18 56 15.7	28.61	29.94	21	6 58 32.34	1.07	18 24 28.2	15.21	15.92
7	6 24 16.81	2.01	18 47 31.8	28.45	29.77	22	7 1 46.49	1.05	18 25 6.7	15.01	15.71
8	6 21 57.92	1.99	18 39 11.7	28.27	29.58	23	7 5 4.29	1.04	18 25 27.9	14.81	15.50
9	6 19 45.60	1.98	18 31 17.1	28.06	29.36	24	7 8 25.62	1.03	18 25 30.9	14.62	15.30
10	6 17 40.52	1.96	N. 18 23 49.7	27.83	29.12	25	7 11 50.31	1.01	N. 18 25 14.9	14.43	15.10
11	6 15 43.25	1.94	18 16 50.7	27.57	28.85	26	7 15 18.23	1.00	18 24 38.9	14.25	14.91
12	6 13 54.28	1.92	18 10 21.3	27.30	28.57	27	7 18 49.24	0.99	18 23 42.4	14.07	14.72
13	6 12 14.09	1.90	18 4 22.5	27.01	28.26	28	7 22 23.22	0.98	18 22 24.5	13.89	14.53
14	6 10 43.05	1.87	17 58 54.7	26.70	27.94	29	7 26 0.02	0.96	18 20 44.6	13.71	14.35
15	6 9 21.46	1.85	17 53 58.4	26.39	27.61	30	7 29 39.53	0.95	18 18 42.0	13.55	14.18
16	6 8 9.54	1.83	N. 17 49 34.0	26.06	27.27	31	7 33 21.63	0.94	N. 18 16 16.1	13.38	14.00
17	6 7 7.50	1.80	17 45 41.1	25.73	26.92	Sept. 1	7 37 6.20	0.93	18 13 26.3	13.22	13.83
18	6 6 15.44	1.77	17 42 19.5	25.38	26.56	2	7 40 53.13	0.92	18 10 12.0	13.06	13.67
19	6 5 33.43	1.75	17 39 28.8	25.03	26.19	3	7 44 42.30	0.91	18 6 38.2	12.91	13.51
20	6 5 1.46	1.73	17 37 8.2	24.68	25.82	4	7 48 33.62	0.89	18 2 28.3	12.76	13.35
21	6 4 39.50	1.70	17 35 16.8	24.32	25.45	5	7 52 27.00	0.88	17 57 58.0	12.61	13.19
22	6 4 27.44	1.68	N. 17 33 53.6	23.96	25.07	6	7 56 22.32	0.87	N. 17 53 1.5	12.46	13.04
23	6 4 25.17	1.65	17 32 57.3	23.61	24.70	7	8 0 19.51	0.86	17 47 38.4	12.32	12.89
24	6 4 32.54	1.63	17 32 26.7	23.25	24.33	8	8 4 18.48	0.85	17 41 48.4	12.18	12.75
25	6 4 49.39	1.60	17 32 20.3	22.90	23.96	9	8 8 19.13	0.84	17 35 31.1	12.05	12.61
26	6 5 15.49	1.57	17 32 36.6	22.54	23.59	10	8 12 21.40	0.83	17 28 46.4	11.92	12.47
27	6 5 50.66	1.55	17 33 14.0	22.19	23.22	11	8 16 25.20	0.82	17 21 34.0	11.79	12.34
28	6 6 34.67	1.53	N. 17 34 10.9	21.85	22.86	12	8 20 30.46	0.81	N. 17 13 53.6	11.67	12.21
29	6 7 27.30	1.50	17 35 25.7	21.50	22.50	13	8 24 37.11	0.80	17 5 45.1	11.54	12.08
30	6 8 28.30	1.48	17 36 56.7	21.17	22.15	14	8 28 45.06	0.80	16 57 8.5	11.42	11.95
31	6 9 37.43	1.46	17 38 42.2	20.83	21.80	15	8 32 54.24	0.79	16 48 3.4	11.31	11.83
Aug. 1	6 10 54.43	1.43	17 40 40.5	20.51	21.46	16	8 37 4.59	0.78	16 38 29.9	11.19	11.71
2	6 12 19.08	1.41	17 42 49.8	20.18	21.12	17	8 41 16.03	0.77	16 28 27.9	11.08	11.59
3	6 13 51.13	1.39	N. 17 45 8.5	19.87	20.79	18	8 45 28.49	0.76	N. 16 17 57.4	10.97	11.48
4	6 15 30.35	1.37	17 47 35.1	19.56	20.47	19	8 49 41.91	0.75	16 6 58.5	10.87	11.37
5	6 17 16.51	1.35	17 50 7.7	19.26	20.15	20	8 53 56.21	0.74	15 55 31.2	10.76	11.26
6	6 19 9.38	1.33	17 52 44.8	18.96	19.84	21	8 58 11.34	0.74	15 43 35.5	10.66	11.15
7	6 21 8.73	1.31	17 55 24.7	18.67	19.54	22	9 2 27.24	0.73	15 31 11.6	10.56	11.04
8	6 23 14.36	1.29	17 58 6.1	18.39	19.24	23	9 6 43.85	0.72	15 18 19.7	10.46	10.94
9	6 25 26.06	1.27	N. 18 0 47.3	18.11	18.95	24	9 11 1.10	0.72	N. 15 4 59.8	10.35	10.83
10	6 27 43.63	1.25	18 3 26.9	17.83	18.66	25	9 15 18.95	0.71	14 51 12.1	10.25	10.73
11	6 30 6.87	1.23	18 6 3.3	17.57	18.38	26	9 19 37.34	0.70	14 36 57.0	10.16	10.63
12	6 32 35.61	1.21	18 8 35.2	17.31	18.11	27	9 23 56.22	0.69	14 22 14.6	10.07	10.54
13	6 35 9.66	1.20	18 11 1.3	17.05	17.84	28	9 28 15.54	0.68	14 7 5.3	9.98	10.44
14	6 37 48.84	1.18	18 13 20.2	16.80	17.58	29	9 32 35.25	0.68	13 51 29.2	9.89	10.35
15	6 40 32.96	1.16	N. 18 15 30.7	16.56	17.33	30	9 36 55.32	0.67	N. 13 35 26.8	9.80	10.26
16	6 43 21.86	1.15	18 17 31.5	16.32	17.08	Oct. 1	9 41 15.71	0.67	13 18 58.3	9.72	10.17
17	6 46 15.39	1.13	18 19 21.2	16.09	16.84	2	9 45 36.38	0.66	13 2 4.0	9.63	10.08
	6 49 13.37	1.12	N. 18 20 58.8	15.86	16.60		9 49 57.30	0.65	N. 12 44 44.5	9.56	10.00

VENUS, 1924.

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AT TRANSIT AT GREENWICH.

Date.	Apparent Right Ascension.	Sid. Time of Semid. pass st Merid.	Apparent Declination.	Semidiameter.	Hor. Par.	Date.	Apparent Right Ascension.	Sid. Time of Semid. pass st Merid.	Apparent Declination.	Semidiameter.	Hor. Par.
	h m s	s	° ' "	"	"		h m s	s	° ' "	"	"
ct. 3	9 54 18.44	0.64	N. 12 26 59.9	9.48	9.92	Nov. 18	13 17 13.62	0.47	S. 6 7 8.4	7.00	7.32
4	9 58 39.78	0.64	12 8 50.8	9.40	9.84	19	13 21 46.31	0.47	6 33 49.9	6.96	7.28
5	10 3 1.29	0.63	11 50 17.6	9.32	9.76	20	13 26 19.72	0.47	7 0 26.3	6.92	7.24
6	10 7 22.97	0.63	11 31 20.6	9.25	9.68	21	13 30 53.87	0.46	7 26 56.8	6.89	7.21
7	10 11 44.78	0.62	11 12 0.2	9.18	9.60	22	13 35 28.80	0.46	7 53 20.6	6.85	7.17
8	10 16 6.72	0.62	10 52 16.9	9.11	9.53	23	13 40 4.52	0.46	8 19 37.1	6.82	7.14
9	10 20 28.78	0.61	N. 10 32 11.1	9.03	9.45	24	13 44 41.07	0.46	S. 8 45 45.3	6.79	7.10
10	10 24 50.95	0.61	10 11 43.3	8.96	9.38	25	13 49 18.45	0.46	9 11 44.4	6.76	7.07
11	10 29 13.22	0.60	9 50 54.0	8.89	9.31	26	13 53 56.70	0.45	9 37 33.7	6.72	7.03
12	10 33 35.57	0.60	9 29 43.7	8.83	9.24	27	13 58 35.84	0.45	10 3 12.4	6.69	7.00
13	10 37 58.02	0.59	9 8 12.9	8.76	9.17	28	14 3 15.89	0.45	10 28 39.7	6.66	6.97
14	10 42 20.54	0.59	8 46 22.1	8.70	9.10	29	14 7 56.87	0.45	10 53 54.7	6.63	6.94
15	10 46 43.14	0.58	N. 8 24 11.9	8.63	9.03	30	14 12 38.82	0.45	S. 11 18 56.5	6.60	6.91
16	10 51 5.81	0.58	8 1 42.9	8.57	8.97	Dec. 1	14 17 21.75	0.45	11 43 44.6	6.58	6.88
17	10 55 28.55	0.58	7 38 55.6	8.51	8.90	2	14 22 5.68	0.45	12 8 18.0	6.55	6.85
18	10 59 51.36	0.57	7 15 50.5	8.45	8.84	3	14 26 50.65	0.45	12 32 35.9	6.52	6.82
19	11 4 14.25	0.57	6 52 28.3	8.39	8.78	4	14 31 36.66	0.44	12 56 37.7	6.49	6.79
20	11 8 37.22	0.56	6 28 49.5	8.33	8.72	5	14 36 23.74	0.44	13 20 22.4	6.46	6.76
21	11 13 0.26	0.56	N. 6 4 54.9	8.27	8.66	6	14 41 11.92	0.44	S. 13 43 49.3	6.43	6.73
22	11 17 23.39	0.55	5 40 44.9	8.22	8.60	7	14 46 1.22	0.44	14 6 57.7	6.40	6.70
23	11 21 46.61	0.55	5 16 20.3	8.16	8.54	8	14 50 51.65	0.44	14 29 46.6	6.38	6.67
24	11 26 9.93	0.54	4 51 41.7	8.10	8.48	9	14 55 43.23	0.44	14 52 15.3	6.35	6.64
25	11 30 33.35	0.54	4 26 49.7	8.05	8.42	10	15 0 35.96	0.44	15 14 23.1	6.33	6.62
26	11 34 56.87	0.53	4 1 45.0	8.00	8.37	11	15 5 29.87	0.44	15 36 9.1	6.30	6.59
27	11 39 20.53	0.53	N. 3 36 28.3	7.94	8.31	12	15 10 24.97	0.44	S. 15 57 32.6	6.28	6.57
28	11 43 44.32	0.53	3 11 0.3	7.89	8.26	13	15 15 21.26	0.44	16 18 32.8	6.25	6.54
29	11 48 8.26	0.52	2 45 21.6	7.84	8.21	14	15 20 18.75	0.43	16 39 8.8	6.23	6.52
30	11 52 32.36	0.52	2 19 32.9	7.80	8.16	15	15 25 17.45	0.43	16 59 19.9	6.20	6.49
31	11 56 56.65	0.51	1 53 34.9	7.75	8.11	16	15 30 17.35	0.43	17 19 5.4	6.18	6.46
ov. 1	12 1 21.14	0.51	1 27 28.4	7.70	8.06	17	15 35 18.46	0.43	17 38 24.5	6.15	6.43
2	12 5 45.86	0.51	N. 1 1 13.9	7.65	8.01	18	15 40 20.78	0.43	S. 17 57 16.3	6.13	6.41
3	12 10 10.83	0.51	0 34 52.2	7.61	7.96	19	15 45 24.29	0.43	18 15 40.2	6.11	6.39
4	12 14 36.06	0.50	N. 0 8 23.9	7.56	7.91	20	15 50 28.99	0.43	18 33 35.3	6.08	6.36
5	12 19 1.60	0.50	S. 0 18 10.3	7.51	7.86	21	15 55 34.88	0.43	18 51 1.1	6.06	6.34
6	12 23 27.46	0.50	0 44 49.7	7.47	7.81	22	16 0 41.93	0.43	19 7 56.6	6.04	6.32
7	12 27 53.68	0.50	1 11 33.6	7.43	7.77	23	16 5 50.14	0.43	19 24 21.2	6.02	6.30
8	12 32 20.28	0.49	S. 1 38 21.2	7.38	7.72	24	16 10 59.47	0.42	S. 19 40 14.2	5.99	6.27
9	12 36 47.29	0.49	2 5 12.0	7.34	7.68	25	16 16 9.91	0.42	19 55 34.8	5.97	6.25
10	12 41 14.75	0.49	2 32 5.1	7.30	7.64	26	16 21 21.44	0.42	20 10 22.5	5.95	6.23
11	12 45 42.67	0.49	2 59 0.0	7.26	7.60	27	16 26 34.02	0.42	20 24 36.5	5.93	6.21
12	12 50 11.08	0.48	3 25 55.7	7.22	7.56	28	16 31 47.63	0.42	20 38 16.2	5.91	6.18
13	12 54 40.03	0.48	3 52 51.6	7.19	7.52	29	16 37 2.24	0.42	20 51 21.0	5.89	6.16
14	12 59 9.52	0.48	S. 4 19 47.0	7.15	7.48	30	16 42 17.82	0.42	S. 21 3 50.1	5.87	6.14
15	13 3 39.60	0.48	4 46 41.1	7.12	7.44	31	16 47 34.33	0.42	21 15 43.2	5.85	6.12
16	13 8 10.30	0.47	5 13 33.2	7.07	7.40	32	16 52 51.76	0.42	S. 21 26 59.6	5.83	6.10
17	13 12 41.63	0.47	S. 5 40 22.5	7.03	7.36						

AT TRANSIT AT GREENWICH.

Date.	Apparent Right Ascension.	Sid. Time of Semi- pass. Merid.	Apparent Declination.	Semidiameter.	Hor. Par.	Date.	Apparent Right Ascension.	Sid. Time of Semi- pass. Merid.	Apparent Declination.	Semidiameter.	Hor. Par.
	h m s	s	° ' "	"	"		h m s	s	° ' "	"	"
Jan. 19	15 53 11.75	0.18	S. 19 41 30.7	2.50	4.70	Mar. 5	17 58 37.42	0.23	S. 23 31 16.7	3.22	6.06
20	15 55 51.22	0.18	19 50 4.4	2.51	4.72	6	18 1 22.63	0.24	23 32 21.4	3.24	6.10
21	15 58 30.96	0.18	19 58 29.5	2.52	4.74	7	18 4 7.75	0.24	23 33 16.0	3.26	6.14
22	16 1 10.96	0.18	20 6 45.7	2.53	4.76	8	18 6 52.78	0.24	23 34 0.6	3.29	6.18
23	16 3 51.23	0.18	20 14 53.1	2.55	4.79	9	18 9 37.69	0.24	23 34 35.2	3.31	6.22
24	16 6 31.76	0.18	20 22 51.6	2.56	4.81	10	18 12 22.48	0.24	23 34 59.8	3.33	6.26
25	16 9 12.56	0.18	S. 20 30 41.2	2.57	4.84	11	18 15 7.15	0.24	S. 23 35 14.5	3.35	6.30
26	16 11 53.61	0.18	20 38 21.7	2.58	4.86	12	18 17 51.69	0.25	23 35 19.3	3.37	6.34
27	16 14 34.91	0.19	20 45 53.1	2.60	4.89	13	18 20 36.09	0.25	23 35 14.3	3.39	6.38
28	16 17 16.45	0.19	20 53 15.4	2.61	4.91	14	18 23 20.34	0.25	23 34 59.5	3.41	6.42
29	16 19 58.23	0.19	21 0 28.4	2.62	4.94	15	18 26 4.42	0.25	23 34 35.0	3.44	6.47
30	16 22 40.24	0.19	21 7 32.2	2.63	4.96	16	18 28 48.35	0.25	23 34 0.8	3.47	6.51
31	16 25 22.46	0.19	S. 21 14 26.6	2.65	4.99	17	18 31 32.11	0.25	S. 23 33 17.0	3.49	6.56
Feb. 1	16 28 4.90	0.19	21 21 11.5	2.66	5.01	18	18 34 15.69	0.26	23 32 23.5	3.51	6.60
2	16 30 47.54	0.19	21 27 47.0	2.68	5.04	19	18 36 59.08	0.26	23 31 20.6	3.54	6.65
3	16 33 30.37	0.19	21 34 12.9	2.69	5.06	20	18 39 42.29	0.26	23 30 8.3	3.56	6.69
4	16 36 13.38	0.20	21 40 29.1	2.71	5.09	21	18 42 25.29	0.26	23 28 46.6	3.58	6.74
5	16 38 56.57	0.20	21 46 35.7	2.72	5.12	22	18 45 8.07	0.26	23 27 15.6	3.61	6.78
6	16 41 39.94	0.20	S. 21 52 32.6	2.74	5.14	23	18 47 50.63	0.26	S. 23 25 35.3	3.64	6.83
7	16 44 23.47	0.20	21 58 19.6	2.75	5.17	24	18 50 32.95	0.27	23 23 46.0	3.66	6.88
8	16 47 7.15	0.20	22 3 56.9	2.77	5.20	25	18 53 15.02	0.27	23 21 47.6	3.69	6.93
9	16 49 51.00	0.20	22 9 24.3	2.78	5.23	26	18 55 56.84	0.27	23 19 40.3	3.71	6.98
10	16 52 34.98	0.20	22 14 41.8	2.80	5.26	27	18 58 38.38	0.27	23 17 24.0	3.74	7.03
11	16 55 19.11	0.20	22 19 49.4	2.81	5.29	28	19 1 19.62	0.27	23 14 59.1	3.77	7.08
12	16 58 3.37	0.20	S. 22 24 47.0	2.83	5.32	29	19 4 0.55	0.28	S. 23 12 25.4	3.80	7.13
13	17 0 47.76	0.21	22 29 34.6	2.84	5.35	30	19 6 41.16	0.28	23 9 43.1	3.82	7.18
14	17 3 32.27	0.21	22 34 12.2	2.86	5.38	31	19 9 21.44	0.28	23 6 52.3	3.85	7.23
15	17 6 16.91	0.21	22 38 39.7	2.87	5.41	Apr. 1	19 12 1.37	0.28	23 3 53.2	3.87	7.28
16	17 9 1.66	0.21	22 42 57.1	2.89	5.44	2	19 14 40.94	0.28	23 0 45.7	3.90	7.34
17	17 11 46.51	0.21	22 47 4.5	2.91	5.47	3	19 17 20.14	0.29	22 57 30.1	3.93	7.39
18	17 14 31.45	0.21	S. 22 51 1.8	2.92	5.50	4	19 19 58.95	0.29	S. 22 54 6.4	3.97	7.45
19	17 17 16.50	0.21	22 54 49.0	2.94	5.53	5	19 22 37.37	0.29	22 50 34.8	4.00	7.51
20	17 20 1.63	0.21	22 58 26.0	2.96	5.57	6	19 25 15.37	0.29	22 46 55.4	4.02	7.56
21	17 22 46.86	0.22	23 1 52.9	2.97	5.60	7	19 27 52.97	0.29	22 43 8.3	4.05	7.62
22	17 25 32.15	0.22	23 5 9.6	2.99	5.63	8	19 30 30.14	0.30	22 39 13.5	4.08	7.68
23	17 28 17.52	0.22	23 8 16.2	3.01	5.67	9	19 33 6.87	0.30	22 35 11.3	4.11	7.74
24	17 31 2.93	0.22	S. 23 11 12.5	3.03	5.70	10	19 35 43.17	0.30	S. 22 31 1.8	4.15	7.80
25	17 33 48.39	0.22	23 13 58.6	3.05	5.74	11	19 38 19.02	0.30	22 26 44.9	4.18	7.86
26	17 36 33.88	0.22	23 16 34.6	3.06	5.77	12	19 40 54.42	0.30	22 22 21.0	4.21	7.92
27	17 39 19.39	0.22	23 19 0.5	3.08	5.81	13	19 43 29.36	0.31	22 17 50.2	4.24	7.98
28	17 42 4.90	0.23	23 21 16.1	3.10	5.84	14	19 46 3.83	0.31	22 13 12.6	4.27	8.04
29	17 44 50.41	0.23	23 23 21.6	3.12	5.88	15	19 48 37.82	0.31	22 8 28.2	4.31	8.10
Mar. 1	17 47 35.90	0.23	S. 23 25 16.9	3.14	5.91	16	19 51 11.34	0.31	S. 22 3 37.3	4.35	8.17
2	17 50 21.36	0.23	23 27 2.0	3.16	5.95	17	19 53 44.36	0.32	21 58 40.1	4.38	8.23
3	17 53 6.77	0.23	23 28 37.0	3.18	5.98	18	19 56 16.89	0.32	21 53 36.5	4.41	8.30
4	17 55 52.13	0.23	S. 23 30 1.9	3.20	6.02	19	19 58 48.92	0.32	S. 21 48 26.8	4.45	8.36

AT TRANSIT AT GREENWICH.

Date.	Apparent Right Ascension.	Sid. Time of Sun. pass- Merid	Apparent Declination.	Semidiameter.	Hor. Par.	Date.	Apparent Right Ascension.	Sid. Time of Sun. pass- Merid	Apparent Declination.	Semidiameter.	Hor. Par.
	h m s	s	° ' "	"	"		h m s	s	° ' "	"	"
Apr. 20	20 120.42	0.32	S. 21 43 11.3	4.49	8.43	June 5	21 44 10.20	0.47	S. 16 50 43.2	6.77	12.73
21	20 351.41	0.32	21 37 49.9	4.52	8.50	6	21 46 0.87	0.48	16 44 42.6	6.83	12.85
22	20 621.85	0.33	21 32 22.9	4.56	8.57	7	21 47 50.20	0.48	16 38 47.3	6.90	12.98
23	20 851.74	0.33	21 26 50.5	4.59	8.64	8	21 49 38.16	0.49	16 32 57.4	6.97	13.11
24	20 1121.06	0.33	21 21 12.8	4.63	8.71	9	21 51 24.75	0.49	16 27 13.3	7.04	13.24
25	20 1349.79	0.33	21 15 30.1	4.67	8.78	10	21 53 9.93	0.50	16 21 35.2	7.11	13.37
26	20 1617.91	0.34	S. 21 9 42.5	4.71	8.86	11	21 54 53.69	0.50	S. 16 16 3.3	7.19	13.51
27	20 1845.42	0.34	21 3 50.2	4.75	8.93	12	21 56 36.01	0.51	16 10 38.0	7.26	13.64
28	20 2112.29	0.34	20 57 53.4	4.80	9.01	13	21 58 16.84	0.51	16 5 19.6	7.33	13.78
29	20 2338.50	0.35	20 51 52.3	4.84	9.09	14	21 59 56.16	0.52	16 0 8.3	7.40	13.92
30	20 264.05	0.35	20 45 47.0	4.87	9.16	15	22 1 33.94	0.52	15 55 4.4	7.48	14.06
May 1	20 2828.91	0.35	20 39 37.8	4.91	9.24	16	22 3 10.17	0.53	15 50 8.4	7.55	14.20
2	20 3053.09	0.35	S. 20 33 24.9	4.96	9.32	17	22 4 44.80	0.53	S. 15 45 20.4	7.63	14.35
3	20 3316.56	0.36	20 27 8.4	5.00	9.40	18	22 6 17.77	0.54	15 40 40.9	7.70	14.50
4	20 3539.30	0.36	20 20 48.6	5.04	9.48	19	22 7 49.05	0.54	15 36 10.3	7.78	14.64
5	20 381.32	0.36	20 14 25.6	5.09	9.56	20	22 9 18.61	0.55	15 31 48.8	7.86	14.79
6	20 4022.59	0.36	20 7 59.7	5.13	9.64	21	22 10 46.39	0.55	15 27 36.7	7.94	14.94
7	20 4243.11	0.37	20 1 31.0	5.17	9.72	22	22 12 12.34	0.56	15 23 34.5	8.02	15.09
8	20 452.87	0.37	S. 19 54 59.8	5.22	9.81	23	22 13 36.41	0.56	S. 15 19 42.6	8.11	15.25
9	20 4721.84	0.37	19 48 26.3	5.26	9.90	24	22 14 58.55	0.57	15 16 1.2	8.19	15.40
10	20 4940.04	0.38	19 41 50.7	5.31	9.99	25	22 16 18.72	0.57	15 12 30.8	8.28	15.56
11	20 5157.44	0.38	19 35 13.1	5.36	10.08	26	22 17 36.88	0.58	15 9 11.5	8.36	15.72
12	20 5414.03	0.38	19 28 33.8	5.41	10.17	27	22 18 52.97	0.58	15 6 3.8	8.45	15.88
13	20 5629.82	0.39	19 21 53.0	5.46	10.26	28	22 20 6.96	0.59	15 3 7.8	8.54	16.04
14	20 5844.79	0.39	S. 19 15 10.9	5.51	10.35	29	22 21 18.78	0.59	S. 15 0 24.0	8.63	16.21
15	21 058.92	0.39	19 8 27.6	5.55	10.44	30	22 22 28.40	0.60	14 57 52.6	8.71	16.37
16	21 312.22	0.40	19 1 43.5	5.60	10.54	July 1	22 23 35.78	0.61	14 55 34.0	8.79	16.54
17	21 524.66	0.40	18 54 58.8	5.66	10.63	2	22 24 40.86	0.61	14 53 28.2	8.88	16.71
18	21 736.23	0.40	18 48 13.7	5.71	10.73	3	22 25 43.62	0.62	14 51 35.7	8.98	16.88
19	21 946.91	0.40	18 41 28.5	5.77	10.83	4	22 26 44.01	0.63	14 49 56.5	9.07	17.05
20	21 1156.70	0.41	S. 18 34 43.4	5.82	10.93	5	22 27 41.98	0.63	S. 14 48 30.9	9.16	17.22
21	21 145.55	0.41	18 27 58.6	5.87	11.03	6	22 28 37.51	0.64	14 47 19.1	9.25	17.39
22	21 1613.45	0.42	18 21 14.5	5.92	11.14	7	22 29 30.56	0.65	14 46 21.3	9.35	17.57
23	21 1820.37	0.42	18 14 31.4	5.98	11.24	8	22 30 21.09	0.65	14 45 37.6	9.44	17.74
24	21 2026.30	0.42	18 7 49.4	6.04	11.35	9	22 31 9.06	0.66	14 45 8.3	9.53	17.92
25	21 2231.19	0.43	18 1 8.9	6.09	11.45	10	22 31 54.44	0.66	14 44 53.3	9.62	18.09
26	21 2435.04	0.43	S. 17 54 30.2	6.15	11.56	11	22 32 37.19	0.67	S. 14 44 52.9	9.72	18.27
27	21 2637.80	0.44	17 47 53.6	6.21	11.67	12	22 33 17.27	0.68	14 45 7.1	9.81	18.45
28	21 2839.47	0.44	17 41 19.3	6.27	11.78	13	22 33 54.65	0.68	14 45 36.1	9.91	18.63
29	21 3040.01	0.45	17 34 47.6	6.33	11.89	14	22 34 29.28	0.69	14 46 19.9	10.00	18.81
30	21 3239.39	0.45	17 28 18.8	6.39	12.01	15	22 35 1.12	0.70	14 47 18.7	10.10	18.99
31	21 3437.60	0.45	17 21 53.3	6.45	12.12	16	22 35 30.12	0.70	14 48 32.4	10.19	19.17
June 1	21 3634.61	0.46	S. 17 15 31.2	6.51	12.24	17	22 35 56.25	0.71	S. 14 50 1.2	10.29	19.35
2	21 3830.40	0.46	17 9 12.9	6.57	12.36	18	22 36 19.46	0.72	14 51 45.2	10.39	19.53
3	21 4024.94	0.46	17 2 58.6	6.64	12.48	19	22 36 39.70	0.72	14 53 44.2	10.49	19.71
4	21 4218.22	0.47	S. 16 56 48.6	6.70	12.60	20	22 36 56.93	0.73	S. 14 55 58.3	10.58	19.88

AT TRANSIT AT GREENWICH.

Date.	Apparent Right Ascension.	Sid. Time of Semid. pass- Merid.	Apparent Declination.	Semidiameter.	Hor. Par.	Date.	Apparent Right Ascension.	Sid. Time of Semid. pass- Merid.	Apparent Declination.	Semidiameter.	Hor. Par.
	h m s	s	° ' "	"	"		h m s	s	° ' "	"	"
July 21	22 37 11.12	0.74	S. 14 58 27.3	10.67	20.06	Sept. 5	22 5 57.43	0.85	S. 18 21 22.1	12.11	22.76
22	22 37 22.23	0.74	15 1 11.1	10.77	20.23	6	22 5 7.11	0.85	18 22 12.5	12.05	22.64
23	22 37 30.23	0.75	15 4 9.5	10.86	20.41	7	22 4 18.95	0.84	18 22 42.8	11.98	22.52
24	22 37 35.10	0.76	15 7 22.4	10.95	20.58	8	22 3 33.08	0.84	18 22 52.7	11.91	22.39
25	22 37 36.83	0.76	15 10 49.3	11.04	20.75	9	22 2 49.59	0.83	18 22 42.3	11.84	22.26
26	22 37 35.40	0.77	15 14 30.1	11.13	20.92	10	22 2 8.59	0.83	18 22 11.7	11.77	22.12
27	22 37 30.81	0.77	S. 15 18 24.3	11.22	21.09	11	22 1 30.15	0.82	S. 18 21 20.8	11.69	21.97
28	22 37 23.07	0.78	15 22 31.5	11.31	21.25	12	22 0 54.35	0.82	18 20 9.9	11.61	21.82
29	22 37 12.19	0.79	15 26 51.1	11.39	21.41	13	22 0 21.26	0.81	18 18 39.1	11.52	21.66
30	22 36 58.20	0.79	15 31 22.5	11.47	21.57	14	21 59 50.94	0.81	18 16 48.5	11.44	21.50
31	22 36 41.11	0.80	15 36 5.2	11.55	21.72	15	21 59 23.45	0.80	18 14 38.4	11.35	21.34
Aug. 1	22 36 20.98	0.80	15 40 58.4	11.63	21.87	16	21 58 58.83	0.79	18 12 9.0	11.27	21.18
2	22 35 57.84	0.81	S. 15 46 1.4	11.71	22.02	17	21 58 37.13	0.78	S. 18 9 20.5	11.18	21.01
3	22 35 31.76	0.81	15 51 13.5	11.79	22.16	18	21 58 18.38	0.78	18 6 13.1	11.09	20.84
4	22 35 2.79	0.82	15 56 33.7	11.86	22.30	19	21 58 2.64	0.77	18 2 47.0	11.00	20.67
5	22 34 31.02	0.82	16 2 1.3	11.93	22.43	20	21 57 49.92	0.76	17 59 2.5	10.91	20.50
6	22 33 56.52	0.83	16 7 35.3	12.00	22.56	21	21 57 40.26	0.76	17 54 59.8	10.81	20.32
7	22 33 19.39	0.83	16 13 14.7	12.06	22.68	22	21 57 33.67	0.75	17 50 39.4	10.72	20.14
8	22 32 39.71	0.84	S. 16 18 58.6	12.12	22.79	23	21 57 30.17	0.74	S. 17 46 1.4	10.62	19.95
9	22 31 57.58	0.84	16 24 46.0	12.18	22.90	24	21 57 29.75	0.74	17 41 6.2	10.52	19.77
10	22 31 13.10	0.85	16 30 35.9	12.23	23.00	25	21 57 32.43	0.73	17 35 54.0	10.42	19.59
11	22 30 26.38	0.85	16 36 27.2	12.28	23.09	26	21 57 38.21	0.72	17 30 25.1	10.32	19.41
12	22 29 37.53	0.86	16 42 19.1	12.33	23.18	27	21 57 47.07	0.71	17 24 39.8	10.22	19.22
13	22 28 46.68	0.86	16 48 10.3	12.37	23.26	28	21 57 59.02	0.70	17 18 38.5	10.12	19.03
14	22 27 53.93	0.87	S. 16 54 0.0	12.41	23.33	29	21 58 14.03	0.70	S. 17 12 21.4	10.02	18.84
15	22 26 59.42	0.87	16 59 47.2	12.44	23.39	30	21 58 32.08	0.69	17 5 48.9	9.92	18.66
16	22 26 3.28	0.87	17 5 30.6	12.46	23.44	Oct. 1	21 58 53.16	0.69	16 59 1.2	9.83	18.47
17	22 25 5.64	0.87	17 11 9.2	12.49	23.49	2	21 59 17.22	0.68	16 51 58.6	9.73	18.29
18	22 24 6.67	0.87	17 16 42.1	12.52	23.53	3	21 59 44.24	0.67	16 44 41.6	9.63	18.10
19	22 23 6.49	0.87	17 22 8.0	12.53	23.56	4	22 0 14.16	0.66	16 37 10.6	9.53	17.92
20	22 22 5.28	0.88	S. 17 27 26.0	12.54	23.58	5	22 0 46.93	0.66	S. 16 29 25.7	9.43	17.74
21	22 21 3.23	0.88	17 32 34.9	12.55	23.59	6	22 1 22.49	0.65	16 21 27.4	9.34	17.56
22	22 20 0.50	0.88	17 37 33.8	12.55	23.60	7	22 2 0.80	0.64	16 13 16.0	9.24	17.38
23	22 18 57.27	0.88	17 42 21.5	12.55	23.60	8	22 2 41.79	0.63	16 4 51.8	9.14	17.20
24	22 17 53.74	0.88	17 46 57.2	12.54	23.58	9	22 3 25.40	0.63	15 56 15.2	9.05	17.02
25	22 16 50.09	0.88	17 51 19.8	12.53	23.56	10	22 4 11.58	0.62	15 47 26.4	8.96	16.84
26	22 15 46.52	0.88	S. 17 55 28.4	12.52	23.53	11	22 5 0.26	0.61	S. 15 38 25.7	8.87	16.67
27	22 14 43.22	0.87	17 59 22.2	12.49	23.49	12	22 5 51.38	0.60	15 29 13.4	8.77	16.49
28	22 13 40.40	0.87	18 3 0.2	12.46	23.44	13	22 6 44.89	0.60	15 19 49.7	8.68	16.32
29	22 12 38.24	0.87	18 6 21.9	12.43	23.38	14	22 7 40.73	0.59	15 10 15.0	8.59	16.15
30	22 11 36.94	0.87	18 9 26.4	12.40	23.32	15	22 8 38.85	0.59	15 0 29.5	8.50	15.98
31	22 10 36.69	0.87	18 12 13.1	12.36	23.25	16	22 9 39.19	0.58	14 50 33.3	8.41	15.81
Sept. 1	22 9 37.68	0.87	S. 18 14 41.4	12.32	23.17	17	22 10 41.71	0.57	S. 14 40 26.7	8.32	15.64
2	22 8 40.07	0.86	18 16 50.8	12.27	23.08	18	22 11 46.37	0.57	14 30 10.0	8.23	15.47
3	22 7 44.06	0.86	18 18 41.0	12.22	22.98	19	22 12 53.10	0.56	14 19 43.2	8.15	15.31
4	22 6 49.80	0.86	S. 18 20 11.5	12.17	22.87	20	22 14 1.86	0.55	S. 14 9 6.6	8.06	15.15

AT TRANSIT AT GREENWICH.

Date.	Apparent Right Ascension.	Sid. Time of Semid. pass- Merid.	Apparent Declination.	Semidiameter.	Hor. Par.	Date.	Apparent Right Ascension.	Sid. Time of Semid. pass- Merid.	Apparent Declination.	Semidiameter.	Hor. Par.
	h m s	s	° ' "	"	"		h m s	s	° ' "	"	"
Oct. 21	22 15 12.61	0.55	S. 13 58 20.3	7.97	14.99	Nov. 27	23 15 49.52	0.36	S. 5 51 40.0	5.49	10.33
22	22 16 25.29	0.54	13 47 24.7	7.89	14.83	28	23 17 46.91	0.36	5 56 44.6	5.44	10.24
23	22 17 39.88	0.54	13 36 19.8	7.81	14.68	29	23 19 45.01	0.36	5 51 45.3	5.39	10.14
24	22 18 56.32	0.53	13 25 5.7	7.72	14.52	30	23 21 43.78	0.36	5 6 42.3	5.35	10.05
25	22 20 14.57	0.52	13 13 42.6	7.64	14.37	Dec. 1	23 23 43.22	0.35	4 51 35.5	5.30	9.96
26	22 21 34.61	0.51	13 2 10.7	7.56	14.22	2	23 25 43.30	0.35	4 36 25.3	5.25	9.87
27	22 22 56.38	0.51	S. 12 50 30.2	7.49	14.07	3	23 27 43.99	0.35	S. 4 21 11.7	5.20	9.78
28	22 24 19.85	0.50	12 38 41.1	7.41	13.92	4	23 29 45.28	0.35	4 5 54.9	5.16	9.69
29	22 25 44.97	0.50	12 26 43.6	7.33	13.78	5	23 31 47.15	0.34	3 50 35.1	5.11	9.60
30	22 27 11.70	0.49	12 14 38.0	7.25	13.64	6	23 33 49.59	0.34	3 35 12.5	5.06	9.52
31	22 28 40.00	0.49	12 2 24.3	7.18	13.50	7	23 35 52.56	0.33	3 19 47.1	5.02	9.43
Nov. 1	22 30 9.81	0.48	11 50 2.8	7.10	13.36	8	23 37 56.06	0.33	3 4 19.3	4.98	9.35
2	22 31 41.09	0.48	S. 11 37 33.5	7.03	13.22	9	23 40 0.08	0.32	S. 2 48 49.0	4.93	9.27
3	22 33 13.81	0.47	11 24 56.8	6.96	13.08	10	23 42 4.60	0.32	2 33 16.4	4.89	9.19
4	22 34 47.91	0.47	11 12 12.8	6.89	12.95	11	23 44 9.61	0.32	2 17 41.6	4.85	9.11
5	22 36 23.34	0.46	10 59 21.6	6.81	12.81	12	23 46 15.10	0.32	2 2 4.9	4.81	9.03
6	22 38 0.06	0.46	10 46 23.4	6.74	12.68	13	23 48 21.07	0.32	1 46 26.2	4.76	8.95
7	22 39 38.01	0.45	10 33 18.5	6.67	12.55	14	23 50 27.49	0.32	1 30 45.7	4.72	8.88
8	22 41 17.17	0.45	S. 10 20 7.1	6.61	12.43	15	23 52 34.38	0.31	S. 1 15 3.6	4.68	8.80
9	22 42 57.50	0.44	10 6 49.1	6.54	12.30	16	23 54 41.72	0.31	0 59 20.0	4.65	8.73
10	22 44 38.96	0.44	9 53 24.8	6.48	12.18	17	23 56 49.50	0.31	0 43 35.0	4.60	8.65
11	22 46 21.51	0.43	9 39 54.4	6.41	12.06	18	23 58 57.72	0.31	0 27 48.7	4.56	8.58
12	22 48 5.13	0.43	9 26 18.0	6.35	11.94	19	0 1 6.37	0.30	S. 0 12 1.2	4.52	8.51
13	22 49 49.78	0.42	9 12 35.7	6.29	11.82	20	0 3 15.46	0.30	N. 0 3 47.3	4.49	8.44
14	22 51 35.43	0.42	S. 8 58 47.7	6.23	11.71	21	0 5 24.97	0.30	N. 0 19 36.8	4.45	8.37
15	22 53 22.05	0.41	8 44 54.2	6.17	11.59	22	0 7 34.92	0.30	0 35 27.2	4.41	8.30
16	22 55 9.62	0.41	8 30 55.2	6.11	11.48	23	0 9 45.29	0.29	0 51 18.3	4.38	8.23
17	22 56 58.12	0.40	8 16 50.9	6.05	11.36	24	0 11 56.08	0.29	1 7 10.2	4.35	8.17
18	22 58 47.52	0.40	8 2 41.4	5.99	11.25	25	0 14 7.29	0.29	1 23 2.5	4.31	8.10
19	23 0 37.80	0.39	7 48 26.8	5.93	11.14	26	0 16 18.92	0.29	1 38 55.2	4.27	8.04
20	23 2 28.94	0.39	S. 7 34 7.2	5.87	11.04	27	0 18 30.96	0.28	N. 1 54 48.2	4.24	7.97
21	23 4 20.92	0.39	7 19 42.7	5.81	10.93	28	0 20 43.40	0.28	2 10 41.3	4.21	7.91
22	23 6 13.73	0.39	7 5 13.5	5.76	10.83	29	0 22 56.23	0.28	2 26 34.5	4.17	7.84
23	23 8 7.34	0.38	6 50 39.7	5.71	10.73	30	0 25 9.46	0.28	2 42 27.6	4.14	7.78
24	23 10 1.74	0.38	6 36 1.3	5.66	10.63	31	0 27 23.06	0.27	2 58 20.4	4.10	7.72
25	23 11 56.92	0.37	6 21 18.4	5.60	10.53	32	0 29 37.03	0.27	N. 3 14 12.8	4.07	7.66
26	23 13 52.85	0.37	S. 6 6 31.3	5.55	10.43						

AT TRANSIT AT GREENWICH.

Date.	Apparent Right Ascension.	Sid. Time of Equat. Semi- pass st Merid.	Apparent Declination.	Polar Semidiameter.	Hor. Par.	Date.	Apparent Right Ascension.	Sid. Time of Equat. Semi- pass st Merid.	Apparent Declination.	Polar Semidiameter.	Hor. Par.
	h m s	s	° ' "	"	"		h m s	s	° ' "	"	"
Feb. 3	16 53 1.88	1.22	S. 21 51 57.7	15.90	1.52	Mar. 20	17 14 36.05	1.40	S. 22 19 43.9	18.15	1.74
4	16 53 42.84	1.23	21 53 2.2	15.94	1.53	21	17 14 48.29	1.40	22 19 55.2	18.21	1.74
5	16 54 23.34	1.23	21 54 5.3	15.98	1.53	22	17 14 59.76	1.41	22 20 5.7	18.27	1.75
6	16 55 3.37	1.23	21 55 6.9	16.01	1.53	23	17 15 10.46	1.41	22 20 15.3	18.33	1.76
7	16 55 42.92	1.24	21 56 7.2	16.05	1.54	24	17 15 20.39	1.42	22 20 24.0	18.38	1.76
8	16 56 21.99	1.24	21 57 6.0	16.09	1.54	25	17 15 29.53	1.43	22 20 31.8	18.44	1.77
9	16 57 0.56	1.24	S. 21 58 3.4	16.14	1.55	26	17 15 37.88	1.43	S. 22 20 38.9	18.49	1.77
10	16 57 38.63	1.25	21 58 59.4	16.18	1.55	27	17 15 45.45	1.44	22 20 45.1	18.55	1.78
11	16 58 16.19	1.25	21 59 54.0	16.22	1.55	28	17 15 52.22	1.44	22 20 50.4	18.61	1.78
12	16 58 53.24	1.26	22 0 47.2	16.26	1.56	29	17 15 58.18	1.44	22 20 55.0	18.66	1.79
13	16 59 29.77	1.26	22 1 39.1	16.30	1.56	30	17 16 3.35	1.45	22 20 58.8	18.72	1.79
14	17 0 5.76	1.26	22 2 29.7	16.35	1.57	31	17 16 7.72	1.45	22 21 1.7	18.78	1.80
15	17 0 41.22	1.27	S. 22 3 19.0	16.40	1.57	Apr. 1	17 16 11.27	1.46	S. 22 21 3.8	18.84	1.81
16	17 1 16.14	1.27	22 4 7.0	16.44	1.57	2	17 16 14.02	1.46	22 21 5.2	18.90	1.81
17	17 1 50.50	1.27	22 4 53.7	16.49	1.58	3	17 16 15.96	1.47	22 21 5.7	18.96	1.82
18	17 2 24.31	1.28	22 5 39.0	16.53	1.58	4	17 16 17.09	1.47	22 21 5.4	19.02	1.82
19	17 2 57.56	1.28	22 6 23.1	16.58	1.59	5	17 16 17.41	1.47	22 21 4.3	19.08	1.83
20	17 3 30.24	1.28	22 7 6.0	16.62	1.59	6	17 16 16.92	1.48	22 21 2.5	19.14	1.83
21	17 4 2.34	1.29	S. 22 7 47.6	16.67	1.60	7	17 16 15.62	1.48	S. 22 20 59.8	19.19	1.84
22	17 4 33.85	1.29	22 8 28.0	16.72	1.60	8	17 16 13.51	1.49	22 20 56.4	19.25	1.84
23	17 5 4.78	1.29	22 9 7.2	16.77	1.61	9	17 16 10.60	1.49	22 20 52.2	19.31	1.85
24	17 5 35.11	1.30	22 9 45.2	16.82	1.61	10	17 16 6.88	1.49	22 20 47.2	19.36	1.85
25	17 6 4.82	1.30	22 10 22.0	16.86	1.61	11	17 16 2.37	1.50	22 20 41.4	19.42	1.86
26	17 6 33.92	1.31	22 10 57.7	16.91	1.62	12	17 15 57.05	1.50	22 20 34.8	19.48	1.87
27	17 7 2.39	1.31	S. 22 11 32.2	16.96	1.62	13	17 15 50.94	1.51	S. 22 20 27.4	19.53	1.87
28	17 7 30.23	1.31	22 12 5.5	17.01	1.63	14	17 15 44.04	1.51	22 20 19.3	19.59	1.88
29	17 7 57.42	1.32	22 12 37.8	17.07	1.63	15	17 15 36.35	1.52	22 20 10.4	19.65	1.88
Mar. 1	17 8 23.97	1.32	22 13 8.9	17.12	1.64	16	17 15 27.88	1.52	22 20 0.8	19.70	1.89
2	17 8 49.86	1.32	22 13 38.7	17.17	1.64	17	17 15 18.63	1.52	22 19 50.4	19.76	1.89
3	17 9 15.09	1.33	22 14 7.9	17.21	1.65	18	17 15 8.61	1.53	22 19 39.2	19.81	1.90
4	17 9 39.64	1.33	S. 22 14 35.8	17.26	1.65	19	17 14 57.82	1.53	S. 22 19 27.2	19.86	1.90
5	17 10 3.51	1.34	22 15 2.6	17.31	1.66	20	17 14 46.26	1.54	22 19 14.5	19.92	1.91
6	17 10 26.70	1.34	22 15 28.3	17.36	1.66	21	17 14 33.95	1.54	22 19 1.0	19.97	1.91
7	17 10 49.19	1.35	22 15 52.9	17.42	1.67	22	17 14 20.87	1.55	22 18 46.8	20.02	1.92
8	17 11 10.99	1.35	22 16 16.5	17.47	1.67	23	17 14 7.05	1.55	22 18 31.8	20.07	1.92
9	17 11 32.08	1.36	22 16 39.1	17.53	1.68	24	17 13 52.48	1.55	22 18 16.0	20.12	1.93
10	17 11 52.46	1.36	S. 22 17 0.7	17.59	1.68	25	17 13 37.18	1.56	S. 22 17 59.4	20.17	1.93
11	17 12 12.12	1.36	22 17 21.2	17.64	1.69	26	17 13 21.16	1.56	22 17 42.0	20.22	1.94
12	17 12 31.06	1.37	22 17 40.8	17.70	1.69	27	17 13 4.41	1.56	22 17 23.8	20.27	1.94
13	17 12 49.27	1.37	22 17 59.4	17.76	1.70	28	17 12 46.95	1.57	22 17 4.9	20.32	1.94
14	17 13 6.76	1.37	22 18 17.1	17.81	1.70	29	17 12 28.79	1.57	22 16 45.1	20.37	1.95
15	17 13 23.51	1.38	22 18 33.9	17.87	1.71	30	17 12 9.93	1.58	22 16 24.6	20.41	1.95
16	17 13 39.51	1.38	S. 22 18 49.7	17.92	1.72	May 1	17 11 50.40	1.58	S. 22 16 3.2	20.46	1.96
17	17 13 54.78	1.38	22 19 4.6	17.97	1.72	2	17 11 30.19	1.58	22 15 41.0	20.51	1.96
18	17 14 9.29	1.39	22 19 18.6	18.03	1.73	3	17 11 9.33	1.59	22 15 18.1	20.55	1.97
19	17 14 23.05	1.39	S. 22 19 31.7	18.09	1.73	4	17 10 47.82	1.59	S. 22 14 54.4	20.59	1.97

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AT TRANSIT AT GREENWICH.

Date.	Apparent Right Ascension.	Sid. Time of Equat. Semi-d. pass ^W Merid.	Apparent Declination.	Polar Semi-diameter.	Hor. Par.	Date.	Apparent Right Ascension.	Sid. Time of Equat. Semi-d. pass ^W Merid.	Apparent Declination.	Polar Semi-diameter.	Hor. Par.
	h m s	s	° ' "	"	"		h m s	s	° ' "	"	"
May 5	17 10 25.69	1.59	S. 22 14 29.9	20.63	1.98	June 20	16 47 22.77	1.63	S. 21 45 8.7	21.23	2.03
6	17 10 2.94	1.60	22 14 4.6	20.67	1.98	21	16 46 52.67	1.63	21 44 25.8	21.21	2.03
7	17 9 39.60	1.60	22 13 38.6	20.71	1.98	22	16 46 22.91	1.63	21 43 43.3	21.19	2.03
8	17 9 15.68	1.60	22 13 11.7	20.75	1.99	23	16 45 53.50	1.63	21 43 1.2	21.16	2.03
9	17 8 51.18	1.61	22 12 44.1	20.79	1.99	24	16 45 24.47	1.63	21 42 19.6	21.14	2.02
10	17 8 26.14	1.61	22 12 15.7	20.83	1.99	25	16 44 55.85	1.62	21 41 38.5	21.12	2.02
11	17 8 0.56	1.61	S. 22 11 46.6	20.87	2.00	26	16 44 27.64	1.62	S. 21 40 58.0	21.09	2.02
12	17 7 34.47	1.61	22 11 16.7	20.90	2.00	27	16 43 59.86	1.62	21 40 18.0	21.07	2.02
13	17 7 7.87	1.62	22 10 46.1	20.94	2.00	28	16 43 32.54	1.62	21 39 38.7	21.04	2.01
14	17 6 40.80	1.62	22 10 14.8	20.97	2.01	29	16 43 5.69	1.62	21 39 0.1	21.01	2.01
15	17 6 13.26	1.62	22 9 42.7	21.00	2.01	30	16 42 39.33	1.61	21 38 22.2	20.98	2.01
16	17 5 45.27	1.62	22 9 10.0	21.03	2.01	July 1	16 42 13.47	1.61	21 37 45.0	20.95	2.00
17	17 5 16.85	1.63	S. 22 8 36.5	21.06	2.02	2	16 41 48.13	1.61	S. 21 37 8.7	20.92	2.00
18	17 4 48.03	1.63	22 8 2.4	21.09	2.02	3	16 41 23.34	1.61	21 36 33.2	20.89	2.00
19	17 4 18.81	1.63	22 7 27.6	21.12	2.02	4	16 40 59.11	1.60	21 35 58.6	20.85	1.99
20	17 3 49.22	1.63	22 6 52.2	21.15	2.03	5	16 40 35.45	1.60	21 35 25.0	20.81	1.99
21	17 3 19.26	1.63	22 6 16.1	21.17	2.03	6	16 40 12.37	1.60	21 34 52.3	20.78	1.99
22	17 2 48.97	1.63	22 5 39.3	21.20	2.03	7	16 39 49.89	1.59	21 34 20.7	20.74	1.98
23	17 2 18.36	1.63	S. 22 5 2.0	21.22	2.03	8	16 39 28.02	1.59	S. 21 33 50.2	20.70	1.98
24	17 1 47.45	1.64	22 4 24.0	21.24	2.03	9	16 39 6.78	1.59	21 33 20.7	20.66	1.98
25	17 1 16.27	1.64	22 3 45.4	21.26	2.03	10	16 38 46.18	1.58	21 32 52.4	20.62	1.97
26	17 0 44.83	1.64	22 3 6.3	21.28	2.04	11	16 38 26.22	1.58	21 32 25.2	20.57	1.97
27	17 0 13.15	1.64	22 2 26.6	21.29	2.04	12	16 38 6.91	1.58	21 31 59.2	20.53	1.97
28	16 59 41.26	1.64	22 1 46.4	21.31	2.04	13	16 37 48.27	1.57	21 31 34.4	20.49	1.96
29	16 59 9.19	1.64	S. 22 1 5.7	21.32	2.04	14	16 37 30.31	1.57	S. 21 31 10.8	20.44	1.96
30	16 58 36.94	1.64	22 0 24.5	21.33	2.04	15	16 37 13.03	1.57	21 30 48.6	20.40	1.95
31	16 58 4.56	1.64	21 59 42.8	21.34	2.04	16	16 36 56.43	1.56	21 30 27.8	20.35	1.95
June 1	16 57 32.05	1.64	21 59 0.8	21.35	2.04	17	16 36 40.54	1.56	21 30 8.2	20.30	1.94
2	16 56 59.45	1.64	21 58 18.3	21.35	2.04	18	16 36 25.35	1.55	21 29 50.0	20.25	1.94
3	16 56 26.78	1.64	21 57 35.5	21.36	2.04	19	16 36 10.87	1.55	21 29 33.1	20.20	1.93
4	16 55 54.06	1.64	S. 21 56 52.4	21.36	2.05	20	16 35 57.11	1.55	S. 21 29 17.6	20.15	1.93
5	16 55 21.31	1.64	21 56 8.9	21.36	2.05	21	16 35 44.08	1.54	21 29 3.6	20.10	1.93
6	16 54 48.56	1.64	21 55 25.3	21.36	2.05	22	16 35 31.79	1.54	21 28 51.0	20.05	1.92
7	16 54 15.84	1.64	21 54 41.4	21.36	2.05	23	16 35 20.23	1.54	21 28 39.8	20.00	1.92
8	16 53 43.17	1.64	21 53 57.3	21.36	2.05	24	16 35 9.41	1.53	21 28 30.1	19.95	1.91
9	16 53 10.56	1.64	21 53 13.1	21.35	2.05	25	16 34 59.35	1.53	21 28 21.9	19.90	1.91
10	16 52 38.05	1.64	S. 21 52 28.8	21.35	2.04	26	16 34 50.05	1.52	S. 21 28 15.3	19.85	1.90
11	16 52 5.65	1.64	21 51 44.4	21.35	2.04	27	16 34 41.51	1.52	21 28 10.1	19.80	1.90
12	16 51 33.39	1.64	21 51 0.0	21.34	2.04	28	16 34 33.74	1.52	21 28 6.5	19.75	1.89
13	16 51 1.30	1.64	21 50 15.6	21.34	2.04	29	16 34 26.74	1.51	21 28 4.4	19.69	1.89
14	16 50 29.38	1.64	21 49 31.2	21.33	2.04	30	16 34 20.52	1.51	21 28 4.0	19.64	1.88
15	16 49 57.66	1.64	21 48 47.0	21.32	2.04	31	16 34 15.08	1.50	21 28 5.1	19.59	1.88
16	16 49 26.16	1.64	S. 21 48 2.9	21.31	2.04	Aug. 1	16 34 10.41	1.50	S. 21 28 7.7	19.53	1.87
17	16 48 54.91	1.64	21 47 19.0	21.29	2.04	2	16 34 6.53	1.49	21 28 12.0	19.48	1.87
18	16 48 23.91	1.63	21 46 35.3	21.27	2.03	3	16 34 3.43	1.49	21 28 17.9	19.42	1.86
19	16 47 53.19	1.63	S. 21 45 51.9	21.25	2.03	4	16 34 1.12	1.49	S. 21 28 25.3	19.36	1.85

AT TRANSIT AT GREENWICH.

Date.	Apparent Right Ascension.	Sid. Time of Equat. Semi- pass- Merid.	Apparent Declination.	Polar Semi-diameter.	Hor. Par.	Date.	Apparent Right Ascension.	Sid. Time of Equat. Semi- pass- Merid.	Apparent Declination.	Polar Semi-diameter.	Hor. Par.
	h m s	s	° ' "	"	"		h m s	s	° ' "	"	"
Aug. 5	16 33 59.60	1.48	S. 21 28 34.4	19.31	1.85	Sept 5	16 39 32.24	1.36	S. 21 45 35.8	17.62	1.69
6	16 33 58.87	1.48	21 28 45 0	19.25	1.84	6	16 39 54.67	1.35	21 46 29.6	17.57	1.68
7	16 33 58.93	1.47	21 28 57.3	19.20	1.84	7	16 40 17.78	1.35	21 47 24.4	17.51	1.68
8	16 33 59.77	1.47	21 29 11.2	19.14	1.83	8	16 40 41.55	1.34	21 48 20.2	17.46	1.67
9	16 34 1.39	1.47	21 29 26.7	19.09	1.83	9	16 41 6.00	1.34	21 49 17.0	17.41	1.67
10	16 34 3.79	1.46	21 29 43.7	19.03	1.82	10	16 41 31.10	1.34	21 50 14.8	17.36	1.66
11	16 34 6.98	1.46	S. 21 30 2.3	18.97	1.82	11	16 41 56.85	1.33	S. 21 51 13.4	17.31	1.66
12	16 34 10.94	1.45	21 30 22.5	18.92	1.81	12	16 42 23.26	1.33	21 52 12.9	17.26	1.65
13	16 34 15.68	1.45	21 30 44.3	18.86	1.81	13	16 42 50.30	1.33	21 53 13.2	17.21	1.65
14	16 34 21.19	1.44	21 31 7.6	18.80	1.80	14	16 43 17.98	1.32	21 54 14.4	17.16	1.64
15	16 34 27.46	1.44	21 31 32.3	18.75	1.80	15	16 43 46.29	1.32	21 55 16.3	17.12	1.64
16	16 34 34.51	1.44	21 31 58.6	18.69	1.79	16	16 44 15.22	1.32	21 56 19.0	17.07	1.64
17	16 34 42.32	1.43	S. 21 32 26.5	18.63	1.78	17	16 44 44.76	1.31	S. 21 57 22.4	17.03	1.63
18	16 34 50.89	1.43	21 32 55.7	18.58	1.78	18	16 45 14.92	1.31	21 58 26.4	16.98	1.63
19	16 35 0.22	1.43	21 33 26.4	18.53	1.77	19	16 45 45.68	1.31	21 59 31.1	16.93	1.62
20	16 35 10.32	1.42	21 33 58.6	18.47	1.77	20	16 46 17.05	1.30	22 0 36.4	16.89	1.62
21	16 35 21.17	1.42	21 34 32.2	18.42	1.76	21	16 46 49.02	1.30	22 1 42.3	16.84	1.61
22	16 35 32.77	1.41	21 35 7.3	18.36	1.76	22	16 47 21.58	1.30	22 2 48.8	16.80	1.61
23	16 35 45.11	1.41	S. 21 35 43.7	18.31	1.75	23	16 47 54.73	1.29	S. 22 3 55.8	16.76	1.60
24	16 35 58.20	1.40	21 36 21.6	18.25	1.75	24	16 48 28.45	1.29	22 5 3.3	16.71	1.60
25	16 36 12.04	1.40	21 37 0.8	18.20	1.74	25	16 49 2.75	1.29	22 6 11.2	16.67	1.60
26	16 36 26.62	1.39	21 37 41.3	18.15	1.74	26	16 49 37.62	1.28	22 7 19.6	16.62	1.59
27	16 36 41.93	1.39	21 38 23.2	18.09	1.73	27	16 50 13.06	1.28	22 8 28.3	16.58	1.59
28	16 36 57.99	1.39	21 39 6.4	18.04	1.73	28	16 50 49.05	1.28	22 9 37.3	16.53	1.58
29	16 37 14.77	1.38	S. 21 39 50.9	17.99	1.72	29	16 51 25.58	1.27	S. 22 10 46.7	16.49	1.58
30	16 37 32.27	1.38	21 40 36.6	17.93	1.72	30	16 52 2.66	1.27	22 11 56.5	16.45	1.58
31	16 37 50.49	1.37	21 41 23.5	17.88	1.71	Oct. 1	16 52 40.28	1.27	22 13 6.5	16.40	1.57
Sept. 1	16 38 9.43	1.37	21 42 11.6	17.83	1.71	2	16 53 18.42	1.26	22 14 16.7	16.36	1.57
2	16 38 29.09	1.37	21 43 1.0	17.77	1.70	3	16 53 57.09	1.26	22 15 27.1	16.32	1.56
3	16 38 49.45	1.36	21 43 51.5	17.72	1.70	4	16 54 36.27	1.26	S. 22 16 37.6	16.28	1.56
4	16 39 10.50	1.36	S. 21 44 43.1	17.67	1.69						

AT TRANSIT AT GREENWICH.

Date.	Apparent Right Ascension.	Sid. Time of Equat Semi- pass Merid.	Apparent Declination.	Polar Semidiameter.	Hor. Par.	Date.	Apparent Right Ascension.	Sid. Time of Equat. Semi- pass Merid.	Apparent Declination.	Polar Semidiameter.	Hor. Par.
	h m s	s	° ' "	"	"		h m s	s	° ' "	"	"
Jan. 1	13 58 48.22	0.56	S. 9 33 27.1	7.44	0.88	Feb. 16	14 4 6.36	0.61	S. 9 49 50.2	8.03	0.95
2	13 59 3.39	0.56	9 34 35.3	7.45	0.88	17	14 4 4.08	0.61	9 49 21.9	8.04	0.95
3	13 59 18.22	0.56	9 35 41.5	7.46	0.88	18	14 4 1.41	0.61	9 48 51.7	8.06	0.95
4	13 59 32.72	0.56	9 36 45.8	7.48	0.88	19	14 3 58.35	0.61	9 48 19.4	8.07	0.95
5	13 59 46.89	0.56	9 37 48.0	7.49	0.88	20	14 3 54.90	0.61	9 47 45.1	8.08	0.95
6	14 0 0.72	0.57	9 38 48.2	7.50	0.88	21	14 3 51.06	0.61	9 47 8.9	8.09	0.96
7	14 0 14.21	0.57	S. 9 39 46.4	7.51	0.88	22	14 3 46.84	0.61	S. 9 46 30.6	8.11	0.96
8	14 0 27.36	0.57	9 40 42.6	7.53	0.89	23	14 3 42.24	0.61	9 45 50.5	8.12	0.96
9	14 0 40.15	0.57	9 41 36.7	7.54	0.89	24	14 3 37.25	0.62	9 45 8.4	8.13	0.96
10	14 0 52.59	0.57	9 42 28.8	7.55	0.89	25	14 3 31.88	0.62	9 44 24.4	8.15	0.96
11	14 1 4.69	0.57	9 43 18.9	7.56	0.89	26	14 3 26.13	0.62	9 43 38.6	8.16	0.96
12	14 1 16.42	0.57	9 44 6.9	7.58	0.89	27	14 3 20.01	0.62	9 42 50.8	8.17	0.97
13	14 1 27.80	0.57	S. 9 44 52.8	7.59	0.89	28	14 3 13.52	0.62	S. 9 42 1.2	8.19	0.97
14	14 1 38.82	0.57	9 45 36.6	7.60	0.90	29	14 3 6.67	0.62	9 41 9.8	8.20	0.97
15	14 1 49.47	0.57	9 46 18.3	7.61	0.90	Mar. 1	14 2 59.45	0.62	9 40 16.6	8.21	0.97
16	14 1 59.76	0.58	9 46 57.9	7.63	0.90	2	14 2 51.86	0.62	9 39 21.6	8.22	0.97
17	14 2 9.68	0.58	9 47 35.5	7.64	0.90	3	14 2 43.92	0.62	9 38 24.8	8.23	0.97
18	14 2 19.23	0.58	9 48 10.9	7.65	0.90	4	14 2 35.63	0.62	9 37 26.2	8.24	0.97
19	14 2 28.41	0.58	S. 9 48 44.2	7.67	0.90	5	14 2 26.99	0.62	S. 9 36 26.0	8.25	0.98
20	14 2 37.20	0.58	9 49 15.4	7.68	0.91	6	14 2 18.00	0.62	9 35 24.1	8.27	0.98
21	14 2 45.62	0.58	9 49 44.5	7.69	0.91	7	14 2 8.67	0.63	9 34 20.6	8.28	0.98
22	14 2 53.66	0.58	9 50 11.5	7.70	0.91	8	14 1 59.01	0.63	9 33 15.4	8.29	0.98
23	14 3 1.32	0.58	9 50 36.3	7.72	0.91	9	14 1 49.03	0.63	9 32 8.7	8.30	0.98
24	14 3 8.59	0.58	9 50 59.1	7.73	0.91	10	14 1 38.72	0.63	9 31 0.4	8.31	0.98
25	14 3 15.48	0.59	S. 9 51 19.7	7.74	0.91	11	14 1 28.09	0.63	S. 9 29 50.6	8.32	0.98
26	14 3 21.98	0.59	9 51 38.1	7.75	0.91	12	14 1 17.15	0.63	9 28 39.3	8.34	0.98
27	14 3 28.09	0.59	9 51 54.4	7.77	0.92	13	14 1 5.91	0.63	9 27 26.5	8.35	0.98
28	14 3 33.81	0.59	9 52 8.6	7.78	0.92	14	14 0 54.37	0.63	9 26 12.3	8.36	0.98
29	14 3 39.13	0.59	9 52 20.6	7.79	0.92	15	14 0 42.53	0.63	9 24 56.8	8.37	0.98
30	14 3 44.05	0.59	9 52 30.4	7.80	0.92	16	14 0 30.41	0.63	9 23 40.0	8.38	0.99
31	14 3 48.58	0.59	S. 9 52 38.1	7.82	0.92	17	14 0 18.02	0.63	S. 9 22 21.8	8.39	0.99
Feb. 1	14 3 52.70	0.59	9 52 43.6	7.83	0.92	18	14 0 5.35	0.63	9 21 2.5	8.39	0.99
2	14 3 56.43	0.59	9 52 47.0	7.84	0.92	19	13 59 52.42	0.63	9 19 41.9	8.40	0.99
3	14 3 59.76	0.59	9 52 48.2	7.86	0.93	20	13 59 39.22	0.63	9 18 20.1	8.40	0.99
4	14 4 2.68	0.59	9 52 47.3	7.87	0.93	21	13 59 25.78	0.63	9 16 57.1	8.41	0.99
5	14 4 5.20	0.60	9 52 44.2	7.89	0.93	22	13 59 12.08	0.64	9 15 33.1	8.41	0.99
6	14 4 7.31	0.60	S. 9 52 39.0	7.90	0.93	23	13 58 58.14	0.64	S. 9 14 8.0	8.42	0.99
7	14 4 9.02	0.60	9 52 31.6	7.92	0.93	24	13 58 43.97	0.64	9 12 41.8	8.42	0.99
8	14 4 10.33	0.60	9 52 22.0	7.93	0.93	25	13 58 29.59	0.64	9 11 14.8	8.43	1.00
9	14 4 11.24	0.60	9 52 10.3	7.95	0.94	26	13 58 14.98	0.64	9 9 46.8	8.43	1.00
10	14 4 11.74	0.60	9 51 56.5	7.96	0.94	27	13 58 0.16	0.64	9 8 17.9	8.44	1.00
11	14 4 11.84	0.60	9 51 40.6	7.97	0.94	28	13 57 45.14	0.64	9 6 48.1	8.45	1.00
12	14 4 11.54	0.60	S. 9 51 22.6	7.98	0.94	29	13 57 29.92	0.64	S. 9 5 17.6	8.45	1.00
13	14 4 10.84	0.60	9 51 2.6	8.00	0.94	30	13 57 14.50	0.64	9 3 46.2	8.46	1.00
14	14 4 9.75	0.60	9 50 40.5	8.01	0.95	31	13 56 58.90	0.64	9 2 14.1	8.47	1.00
15	14 4 8.25	0.61	S. 9 50 16.4	8.02	0.95	Apr. 1	13 56 43.14	0.64	S. 9 0 41.3	8.47	1.00

AT TRANSIT AT GREENWICH.

Date.	Apparent Right Ascension.	Sid. Time of Equat. Semi- pass. Merid.	Apparent Declination.	Polar Semi-diameter.	Hor. Par.	Date.	Apparent Right Ascension.	Sid. Time of Equat. Semi- pass. Merid.	Apparent Declination.	Polar Semi-diameter.	Hor. Par.
	h m s	s	° ' "	"	"		h m s	s	° ' "	"	"
Apr. 2	13 56 27.21	0.64	S. 8 59 7.9	8.48	1.00	May 18	13 43 54.08	0.63	S. 7 50 49.7	8.40	0.99
3	13 56 11.13	0.64	8 57 33.9	8.48	1.00	19	13 43 40.49	0.63	7 49 42.7	8.39	0.99
4	13 55 54.90	0.64	8 55 59.5	8.49	1.00	20	13 43 27.14	0.63	7 48 37.3	8.38	0.99
5	13 55 38.53	0.64	8 54 24.5	8.49	1.00	21	13 43 14.03	0.63	7 47 33.6	8.38	0.99
6	13 55 22.05	0.64	8 52 49.2	8.49	1.00	22	13 43 1.18	0.63	7 46 31.5	8.37	0.99
7	13 55 5.45	0.64	8 51 13.5	8.50	1.00	23	13 42 48.58	0.63	7 45 31.2	8.36	0.99
8	13 54 48.74	0.64	S. 8 49 37.4	8.50	1.00	24	13 42 36.25	0.63	S. 7 44 32.6	8.35	0.99
9	13 54 31.93	0.64	8 48 1.1	8.50	1.00	25	13 42 24.18	0.63	7 43 35.7	8.34	0.98
10	13 54 15.03	0.64	8 46 24.6	8.51	1.00	26	13 42 12.39	0.63	7 42 40.5	8.33	0.98
11	13 53 58.06	0.64	8 44 47.9	8.51	1.00	27	13 42 0.88	0.62	7 41 47.2	8.32	0.98
12	13 53 41.01	0.64	8 43 11.2	8.51	1.00	28	13 41 49.66	0.62	7 40 55.7	8.31	0.98
13	13 53 23.89	0.64	8 41 34.3	8.51	1.00	29	13 41 38.72	0.62	7 40 6.1	8.30	0.98
14	13 53 6.73	0.64	S. 8 39 57.5	8.51	1.00	30	13 41 28.08	0.62	S. 7 39 18.4	8.29	0.98
15	13 52 49.52	0.64	8 38 20.7	8.52	1.00	31	13 41 17.74	0.62	7 38 32.6	8.28	0.98
16	13 52 32.27	0.64	8 36 44.0	8.52	1.00	June 1	13 41 7.70	0.62	7 37 48.7	8.27	0.98
17	13 52 15.00	0.64	8 35 7.5	8.52	1.00	2	13 40 57.98	0.62	7 37 6.8	8.26	0.97
18	13 51 57.72	0.64	8 33 31.1	8.52	1.00	3	13 40 48.57	0.62	7 36 26.9	8.25	0.97
19	13 51 40.43	0.64	8 31 55.0	8.52	1.00	4	13 40 39.48	0.62	7 35 49.0	8.24	0.97
20	13 51 23.13	0.64	S. 8 30 19.3	8.52	1.00	5	13 40 30.72	0.62	S. 7 35 13.0	8.23	0.97
21	13 51 5.84	0.64	8 28 43.8	8.52	1.00	6	13 40 22.28	0.62	7 34 39.1	8.22	0.97
22	13 50 48.57	0.64	8 27 8.8	8.52	1.00	7	13 40 14.18	0.62	7 34 7.3	8.21	0.97
23	13 50 31.32	0.64	8 25 34.2	8.52	1.00	8	13 40 6.41	0.62	7 33 37.6	8.20	0.97
24	13 50 14.11	0.64	8 24 0.0	8.51	1.00	9	13 39 58.98	0.62	7 33 10.0	8.18	0.97
25	13 49 56.95	0.64	8 22 26.3	8.51	1.00	10	13 39 51.89	0.61	7 32 44.4	8.17	0.96
26	13 49 39.84	0.64	S. 8 20 53.3	8.51	1.00	11	13 39 45.14	0.61	S. 7 32 21.0	8.16	0.96
27	13 49 22.79	0.64	8 19 20.9	8.51	1.00	12	13 39 38.73	0.61	7 31 59.7	8.14	0.96
28	13 49 5.80	0.64	8 17 49.1	8.51	1.00	13	13 39 32.67	0.61	7 31 40.5	8.13	0.96
29	13 48 48.89	0.64	8 16 18.1	8.50	1.00	14	13 39 26.96	0.61	7 31 23.4	8.12	0.96
30	13 48 32.07	0.64	8 14 47.8	8.50	1.00	15	13 39 21.61	0.61	7 31 8.5	8.10	0.96
May 1	13 48 15.35	0.64	8 13 18.4	8.50	1.00	16	13 39 16.60	0.61	7 30 55.7	8.09	0.96
2	13 47 58.74	0.64	S. 8 11 49.9	8.49	1.00	17	13 39 11.95	0.61	S. 7 30 45.0	8.08	0.95
3	13 47 42.24	0.64	8 10 22.3	8.49	1.00	18	13 39 7.65	0.61	7 30 36.5	8.07	0.95
4	13 47 25.87	0.64	8 8 55.7	8.49	1.00	19	13 39 3.70	0.61	7 30 30.2	8.05	0.95
5	13 47 9.62	0.64	8 7 30.0	8.48	1.00	20	13 39 0.12	0.60	7 30 26.0	8.04	0.95
6	13 46 53.51	0.64	8 6 5.5	8.48	1.00	21	13 38 56.89	0.60	7 30 24.0	8.02	0.95
7	13 46 37.55	0.64	8 4 42.0	8.47	1.00	22	13 38 54.03	0.60	7 30 24.2	8.01	0.95
8	13 46 21.75	0.64	S. 8 3 19.8	8.47	1.00	23	13 38 51.54	0.60	S. 7 30 26.5	8.00	0.95
9	13 46 6.12	0.64	8 1 58.7	8.46	1.00	24	13 38 49.41	0.60	7 30 31.0	7.98	0.94
10	13 45 50.66	0.64	8 0 38.8	8.46	1.00	25	13 38 47.65	0.60	7 30 37.7	7.97	0.94
11	13 45 35.38	0.64	7 59 20.3	8.45	1.00	26	13 38 46.25	0.60	7 30 46.6	7.95	0.94
12	13 45 20.29	0.64	7 58 3.1	8.45	1.00	27	13 38 45.23	0.60	7 30 57.6	7.94	0.94
13	13 45 5.39	0.64	7 56 47.3	8.44	1.00	28	13 38 44.57	0.60	7 31 10.8	7.93	0.94
14	13 44 50.70	0.63	S. 7 55 32.8	8.44	1.00	29	13 38 44.27	0.60	S. 7 31 26.1	7.92	0.94
15	13 44 36.22	0.63	7 54 19.8	8.43	1.00	30	13 38 44.35	0.60	7 31 43.7	7.90	0.93
16	13 44 21.95	0.63	7 53 8.2	8.42	0.99	July 1	13 38 44.81	0.60	7 32 3.4	7.89	0.93
17	13 44 7.90	0.63	S. 7 51 58.2	8.41	0.99	2	13 38 45.63	0.60	S. 7 32 25.4	7.88	0.93

AT TRANSIT AT GREENWICH.

Date.	Apparent Right Ascension.	Sid. Time of Equat. Semi- pass ^W Merid.	Apparent Declination.	Polar Semidiameter.	Hor. Par.	Date.	Apparent Right Ascension.	Sid. Time of Equat. Semi- pass ^W Merid.	Apparent Declination.	Polar Semidiameter.	Hor. Par.
	h m s	s	° ' "	"	"		h m s	s	° ' "	"	"
July 3	13 38 46.83	0.59	S. 7 32 49.4	7.86	0.93	July 26	13 40 54.96	0.57	S. 7 51 35.9	7.56	0.89
4	13 38 48.40	0.59	7 33 15.6	7.85	0.93	27	13 41 4.77	0.57	7 52 48.4	7.55	0.89
5	13 38 50.35	0.59	7 33 44.0	7.83	0.93	28	13 41 14.92	0.57	7 54 2.8	7.54	0.89
6	13 38 52.66	0.59	7 34 14.5	7.82	0.92	29	13 41 25.41	0.57	7 55 19.0	7.52	0.89
7	13 38 55.34	0.59	7 34 47.2	7.81	0.92	30	13 41 36.23	0.57	7 56 37.0	7.51	0.89
8	13 38 58.39	0.59	7 35 22.0	7.80	0.92	31	13 41 47.39	0.57	7 57 56.8	7.50	0.88
9	13 39 1.81	0.59	S. 7 35 58.9	7.79	0.92	Aug. 1	13 41 58.88	0.56	S. 7 59 18.4	7.48	0.88
10	13 39 5.60	0.59	7 36 37.9	7.77	0.92	2	13 42 10.70	0.56	8 0 41.7	7.47	0.88
11	13 39 9.76	0.59	7 37 19.0	7.76	0.92	3	13 42 22.85	0.56	8 2 6.8	7.46	0.88
12	13 39 14.28	0.58	7 38 2.2	7.74	0.91	4	13 42 35.32	0.56	8 3 33.6	7.45	0.88
13	13 39 19.16	0.58	7 38 47.4	7.73	0.91	5	13 42 48.11	0.56	8 5 2.0	7.44	0.88
14	13 39 24.40	0.58	7 39 34.7	7.71	0.91	6	13 43 1.22	0.56	8 6 32.0	7.43	0.88
15	13 39 30.00	0.58	S. 7 40 24.0	7.70	0.91	7	13 43 14.65	0.56	S. 8 8 3.7	7.42	0.87
16	13 39 35.96	0.58	7 41 15.3	7.68	0.91	8	13 43 28.38	0.56	8 9 37.0	7.41	0.87
17	13 39 42.28	0.58	7 42 8.6	7.67	0.90	9	13 43 42.43	0.56	8 11 11.9	7.40	0.87
18	13 39 48.95	0.58	7 43 3.9	7.66	0.90	10	13 43 56.78	0.56	8 12 48.4	7.39	0.87
19	13 39 55.98	0.58	7 44 1.1	7.65	0.90	11	13 44 11.43	0.56	8 14 26.4	7.38	0.87
20	13 40 3.36	0.58	7 45 0.3	7.63	0.90	12	13 44 26.38	0.56	8 16 6.0	7.37	0.87
21	13 40 11.09	0.57	S. 7 46 1.5	7.62	0.90	13	13 44 41.63	0.55	S. 8 17 47.0	7.36	0.87
22	13 40 19.17	0.57	7 47 4.6	7.61	0.90	14	13 44 57.17	0.55	8 19 29.5	7.35	0.86
23	13 40 27.59	0.57	7 48 9.6	7.60	0.89	15	13 45 13.00	0.55	8 21 13.5	7.33	0.86
24	13 40 36.37	0.57	7 49 16.5	7.59	0.89	16	13 45 29.12	0.55	8 22 59.0	7.32	0.86
25	13 40 45.49	0.57	S. 7 50 25.3	7.57	0.89	17	13 45 45.52	0.55	S. 8 24 45.8	7.31	0.86

AT TRANSIT AT GREENWICH.

Date.	Apparent Right Ascension.	Sid. Time of Semid. pass- Merid.	Apparent Declination.	Semidiameter.	Hor. Par.	Date.	Apparent Right Ascension.	Sid. Time of Semid. pass- Merid.	Apparent Declination.	Semidiameter.	Hor. Par.
	h m s	s	° ' "	"	"		h m s	s	° ' "	"	"
Jan. 1	23 3 11.62	0.11	S. 6 53 34.4	1.7	0.4	Jan. 5	23 3 40.84	0.11	S. 6 50 23.4	1.7	0.4
2	23 3 18.69	0.11	6 52 48.1	1.7	0.4	6	23 3 48.54	0.11	6 49 33.3	1.7	0.4
3	23 3 25.92	0.11	6 52 0.8	1.7	0.4	7	23 3 56.39	0.11	S. 6 48 42.3	1.7	0.4
4	23 3 33.30	0.11	S. 6 51 12.6	1.7	0.4						
July 28	23 28 33.97	0.12	S. 4 15 41.8	1.8	0.5	Sept. 5	23 23 45.10	0.12	S. 4 47 14.5	1.8	0.5
29	23 28 28.60	0.12	4 16 18.2	1.8	0.5	6	23 23 36.33	0.12	4 48 10.7	1.8	0.5
30	23 28 23.08	0.12	4 16 55.4	1.8	0.5	7	23 23 27.54	0.12	4 49 7.0	1.8	0.5
31	23 28 17.42	0.12	4 17 33.4	1.8	0.5	8	23 23 18.73	0.12	4 50 3.3	1.8	0.5
Aug. 1	23 28 11.64	0.12	4 18 12.2	1.8	0.5	9	23 23 9.91	0.12	4 50 59.7	1.8	0.5
2	23 28 5.72	0.12	4 18 51.9	1.8	0.5	10	23 23 1.08	0.12	4 51 56.1	1.8	0.5
3	23 27 59.66	0.12	S. 4 19 32.4	1.8	0.5	11	23 22 52.25	0.12	S. 4 52 52.5	1.8	0.5
4	23 27 53.49	0.12	4 20 13.6	1.8	0.5	12	23 22 43.40	0.12	4 53 48.8	1.8	0.5
5	23 27 47.19	0.12	4 20 55.6	1.8	0.5	13	23 22 34.56	0.12	4 54 45.1	1.8	0.5
6	23 27 40.77	0.12	4 21 38.4	1.8	0.5	14	23 22 25.73	0.12	4 55 41.3	1.8	0.5
7	23 27 34.23	0.12	4 22 21.9	1.8	0.5	15	23 22 16.89	0.12	4 56 37.4	1.8	0.5
8	23 27 27.56	0.12	4 23 6.1	1.8	0.5	16	23 22 8.07	0.12	4 57 33.4	1.8	0.5
9	23 27 20.79	0.12	S. 4 23 51.0	1.8	0.5	17	23 21 59.27	0.12	S. 4 58 29.2	1.8	0.5
10	23 27 13.91	0.12	4 24 36.5	1.8	0.5	18	23 21 50.48	0.12	4 59 24.9	1.8	0.5
11	23 27 6.91	0.12	4 25 22.7	1.8	0.5	19	23 21 41.71	0.12	5 0 20.3	1.8	0.5
12	23 26 59.80	0.12	4 26 9.6	1.8	0.5	20	23 21 32.96	0.12	5 1 15.6	1.8	0.5
13	23 26 52.60	0.12	4 26 57.0	1.8	0.5	21	23 21 24.25	0.12	5 2 10.6	1.8	0.5
14	23 26 45.29	0.12	4 27 45.1	1.8	0.5	22	23 21 15.56	0.12	5 3 5.4	1.8	0.5
15	23 26 37.89	0.12	S. 4 28 33.7	1.8	0.5	23	23 21 6.91	0.12	S. 5 3 59.8	1.8	0.5
16	23 26 30.39	0.12	4 29 22.9	1.8	0.5	24	23 20 58.30	0.12	5 4 53.9	1.8	0.5
17	23 26 22.80	0.12	4 30 12.7	1.8	0.5	25	23 20 49.73	0.12	5 5 47.7	1.8	0.5
18	23 26 15.13	0.12	4 31 3.0	1.8	0.5	26	23 20 41.21	0.12	5 6 41.2	1.8	0.5
19	23 26 7.36	0.12	4 31 53.9	1.8	0.5	27	23 20 32.75	0.12	5 7 34.3	1.8	0.5
20	23 25 59.51	0.12	4 32 45.2	1.8	0.5	28	23 20 24.33	0.12	5 8 27.0	1.8	0.5
21	23 25 51.58	0.12	S. 4 33 36.9	1.8	0.5	29	23 20 15.97	0.12	S. 5 9 19.3	1.8	0.5
22	23 25 43.57	0.12	4 34 29.1	1.8	0.5	30	23 20 7.67	0.12	5 10 11.1	1.8	0.5
23	23 25 35.49	0.12	4 35 21.7	1.8	0.5	Oct. 1	23 19 59.45	0.12	5 11 2.5	1.8	0.5
24	23 25 27.33	0.12	4 36 14.7	1.8	0.5	2	23 19 51.30	0.12	5 11 53.3	1.8	0.5
25	23 25 19.10	0.12	4 37 8.1	1.8	0.5	3	23 19 43.21	0.12	5 12 43.5	1.8	0.5
26	23 25 10.81	0.12	4 38 1.9	1.8	0.5	4	23 19 35.21	0.12	5 13 33.2	1.8	0.5
27	23 25 2.45	0.12	S. 4 38 56.0	1.8	0.5	5	23 19 27.29	0.12	S. 5 14 22.4	1.8	0.5
28	23 24 54.04	0.12	4 39 50.5	1.8	0.5	6	23 19 19.45	0.12	5 15 11.1	1.8	0.5
29	23 24 45.57	0.12	4 40 45.2	1.8	0.5	7	23 19 11.70	0.12	5 15 59.1	1.8	0.5
30	23 24 37.06	0.12	4 41 40.2	1.8	0.5	8	23 19 4.04	0.12	5 16 46.5	1.8	0.5
31	23 24 28.49	0.12	4 42 35.4	1.8	0.5	9	23 18 56.47	0.12	5 17 33.3	1.8	0.5
Sept. 1	23 24 19.89	0.12	4 43 30.9	1.8	0.5	10	23 18 48.99	0.12	5 18 19.3	1.8	0.5
2	23 24 11.24	0.12	S. 4 44 26.5	1.8	0.5	11	23 18 41.62	0.12	S. 5 19 4.7	1.8	0.5
3	23 24 2.56	0.12	4 45 22.3	1.8	0.5	12	23 18 34.35	0.12	5 19 49.5	1.8	0.5
4	23 23 53.84	0.12	S. 4 46 18.3	1.8	0.5	13	23 18 27.18	0.12	S. 5 20 33.5	1.8	0.5

URANUS, 1924.

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AT TRANSIT AT GREENWICH.

Date.	Apparent Right Ascension.	Sid. Time of Semi- pass. Merid.	Apparent Declination.	Semidiameter.	Hor. Par.	Date.	Apparent Right Ascension.	Sid. Time of Semi- pass. Merid.	Apparent Declination.	Semidiameter.	Hor. Par.
	h m s	s	° ' "	"	"		h m s	s	° ' "	"	"
Oct. 14	23 18 20.12	0.12	S. 5 21 16.7	1.8	0.5	Nov. 23	23 15 35.71	0.12	S. 5 37 10.6	1.7	0.4
15	23 18 13.17	0.12	5 21 59.2	1.8	0.5	24	23 15 35.10	0.12	5 37 11.9	1.7	0.4
16	23 18 6.34	0.12	5 22 40.9	1.8	0.5	25	23 15 34.68	0.12	5 37 12.0	1.7	0.4
17	23 17 59.62	0.12	5 23 21.9	1.8	0.5	26	23 15 34.44	0.12	5 37 10.8	1.7	0.4
18	23 17 53.02	0.12	5 24 2.0	1.8	0.5	27	23 15 34.40	0.12	5 37 8.5	1.7	0.4
19	23 17 46.54	0.12	5 24 41.4	1.8	0.5	28	23 15 34.54	0.12	5 37 5.0	1.7	0.4
20	23 17 40.19	0.12	S. 5 25 19.9	1.8	0.5	29	23 15 34.87	0.12	S. 5 37 0.3	1.7	0.4
21	23 17 33.97	0.12	5 25 57.5	1.8	0.5	30	23 15 35.39	0.12	5 36 54.3	1.7	0.4
22	23 17 27.88	0.12	5 26 34.3	1.8	0.5	Dec. 1	23 15 36.11	0.11	5 36 47.2	1.7	0.4
23	23 17 21.91	0.12	5 27 10.2	1.8	0.5	2	23 15 37.01	0.11	5 36 38.8	1.7	0.4
24	23 17 16.09	0.12	5 27 45.2	1.8	0.5	3	23 15 38.11	0.11	5 36 29.2	1.7	0.4
25	23 17 10.41	0.12	5 28 19.2	1.8	0.5	4	23 15 39.39	0.11	5 36 18.4	1.7	0.4
26	23 17 4.87	0.12	S. 5 28 52.3	1.8	0.5	5	23 15 40.87	0.11	S. 5 36 6.4	1.7	0.4
27	23 16 59.48	0.12	5 29 24.5	1.8	0.5	6	23 15 42.53	0.11	5 35 53.2	1.7	0.4
28	23 16 54.23	0.12	5 29 55.8	1.8	0.5	7	23 15 44.38	0.11	5 35 38.8	1.7	0.4
29	23 16 49.13	0.12	5 30 26.0	1.8	0.5	8	23 15 46.42	0.11	5 35 23.2	1.7	0.4
30	23 16 44.19	0.12	5 30 55.2	1.8	0.5	9	23 15 48.65	0.11	5 35 6.4	1.7	0.4
31	23 16 39.40	0.12	5 31 23.4	1.8	0.5	10	23 15 51.06	0.11	5 34 48.5	1.7	0.4
Nov. 1	23 16 34.77	0.12	S. 5 31 50.5	1.8	0.5	11	23 15 53.66	0.11	S. 5 34 29.4	1.7	0.4
2	23 16 30.29	0.12	5 32 16.7	1.8	0.5	12	23 15 56.45	0.11	5 34 9.1	1.7	0.4
3	23 16 25.98	0.12	5 32 41.7	1.8	0.5	13	23 15 59.43	0.11	5 33 17.6	1.7	0.4
4	23 16 21.82	0.12	5 33 5.8	1.8	0.5	14	23 16 2.59	0.11	5 33 24.9	1.7	0.4
5	23 16 17.83	0.12	5 33 28.7	1.8	0.5	15	23 16 5.93	0.11	5 33 1.1	1.7	0.4
6	23 16 14.01	0.12	5 33 50.6	1.8	0.5	16	23 16 9.46	0.11	5 32 36.2	1.7	0.4
7	23 16 10.35	0.12	S. 5 34 11.4	1.8	0.5	17	23 16 13.17	0.11	S. 5 32 10.0	1.7	0.4
8	23 16 6.87	0.12	5 34 31.1	1.8	0.5	18	23 16 17.07	0.11	5 31 42.8	1.7	0.4
9	23 16 3.56	0.12	5 34 49.7	1.8	0.5	19	23 16 21.15	0.11	5 31 14.4	1.7	0.4
10	23 16 0.41	0.12	5 35 7.2	1.8	0.5	20	23 16 25.41	0.11	5 30 44.8	1.7	0.4
11	23 15 57.44	0.12	5 35 23.6	1.8	0.4	21	23 16 29.85	0.11	5 30 14.1	1.7	0.4
12	23 15 54.64	0.12	5 35 38.9	1.8	0.4	22	23 16 34.47	0.11	5 29 42.3	1.7	0.4
13	23 15 52.02	0.12	S. 5 35 53.1	1.8	0.4	23	23 16 39.27	0.11	S. 5 29 9.4	1.7	0.4
14	23 15 49.57	0.12	5 36 6.1	1.8	0.4	24	23 16 44.25	0.11	5 28 35.3	1.7	0.4
15	23 15 47.31	0.12	5 36 17.9	1.7	0.4	25	23 16 49.41	0.11	5 28 0.1	1.7	0.4
16	23 15 45.22	0.12	5 36 28.6	1.7	0.4	26	23 16 54.74	0.11	5 27 23.8	1.7	0.4
17	23 15 43.31	0.12	5 36 38.1	1.7	0.4	27	23 17 0.25	0.11	5 26 46.4	1.7	0.4
18	23 15 41.59	0.12	5 36 46.5	1.7	0.4	28	23 17 5.93	0.11	5 26 8.0	1.7	0.4
19	23 15 40.04	0.12	S. 5 36 53.7	1.7	0.4	29	23 17 11.78	0.11	S. 5 25 28.4	1.7	0.4
20	23 15 38.08	0.12	5 36 59.7	1.7	0.4	30	23 17 17.80	0.11	5 24 47.8	1.7	0.4
21	23 15 37.50	0.12	5 37 4.5	1.7	0.4	31	23 17 23.99	0.11	5 24 6.2	1.7	0.4
22	23 15 36.51	0.12	S. 5 37 8.2	1.7	0.4	32	23 17 30.35	0.11	S. 5 23 23.5	1.7	0.4

AT TRANSIT AT GREENWICH.

Date.	Apparent Right Ascension.	Apparent Declination.	Hor. Par.	Date.	Apparent Right Ascension.	Apparent Declination.	Hor. Par.
	h m s	° ' "	"		h m s	° ' "	"
Jan. 1	9 29 51.31	N.15 3 48.7	0.3	Feb. 16	9 25 12.02	N.15 26 41.3	0.3
2	9 29 46.55	15 4 12.7	0.3	17	9 25 5.49	15 27 12.8	0.3
3	9 29 41.70	15 4 37.1	0.3	18	9 24 58.98	15 27 44.2	0.3
4	9 29 36.75	15 5 1.9	0.3	19	9 24 52.50	15 28 15.4	0.3
5	9 29 31.72	15 5 27.2	0.3	20	9 24 46.05	15 28 46.5	0.3
6	9 29 26.60	15 5 52.8	0.3	21	9 24 39.62	15 29 17.4	0.3
7	9 29 21.40	N.15 6 18.8	0.3	22	9 24 33.23	N.15 29 48.1	0.3
8	9 29 16.11	15 6 45.3	0.3	23	9 24 26.87	15 30 18.6	0.3
9	9 29 10.75	15 7 12.1	0.3	24	9 24 20.55	15 30 48.9	0.3
10	9 29 5.31	15 7 39.2	0.3	25	9 24 14.28	15 31 19.0	0.3
11	9 28 59.80	15 8 6.7	0.3	26	9 24 8.04	15 31 48.9	0.3
12	9 28 54.21	15 8 34.5	0.3	27	9 24 1.85	15 32 18.6	0.3
13	9 28 48.56	N.15 9 2.6	0.3	28	9 23 55.71	N.15 32 48.0	0.3
14	9 28 42.83	15 9 31.1	0.3	29	9 23 49.61	15 33 17.1	0.3
15	9 28 37.04	15 9 59.8	0.3	Mar. 1	9 23 43.57	15 33 46.0	0.3
16	9 28 31.18	15 10 28.8	0.3	2	9 23 37.58	15 34 14.6	0.3
17	9 28 25.26	15 10 58.1	0.3	3	9 23 31.65	15 34 42.9	0.3
18	9 28 19.29	15 11 27.7	0.3	4	9 23 25.78	15 35 10.9	0.3
19	9 28 13.27	N.15 11 57.5	0.3	5	9 23 19.98	N.15 35 38.6	0.3
20	9 28 7.19	15 12 27.5	0.3	6	9 23 14.24	15 36 6.0	0.3
21	9 28 1.05	15 12 57.8	0.3	7	9 23 8.56	15 36 33.0	0.3
22	9 27 54.87	15 13 28.2	0.3	8	9 23 2.96	15 36 59.7	0.3
23	9 27 48.65	15 13 58.8	0.3	9	9 22 57.42	15 37 26.0	0.3
24	9 27 42.38	15 14 29.7	0.3	10	9 22 51.96	15 37 52.0	0.3
25	9 27 36.07	N.15 15 0.7	0.3	11	9 22 46.58	N.15 38 17.5	0.3
26	9 27 29.72	15 15 31.8	0.3	12	9 22 41.28	15 38 42.7	0.3
27	9 27 23.33	15 16 3.1	0.3	13	9 22 36.05	15 39 7.5	0.3
28	9 27 16.90	15 16 34.6	0.3	14	9 22 30.91	15 39 31.9	0.3
29	9 27 10.45	15 17 6.2	0.3	15	9 22 25.85	15 39 55.9	0.3
30	9 27 3.97	15 17 37.9	0.3	16	9 22 20.88	15 40 19.5	0.3
31	9 26 57.46	N.15 18 9.7	0.3	17	9 22 16.00	N.15 40 42.7	0.3
Feb. 1	9 26 50.92	15 18 41.6	0.3	18	9 22 11.20	15 41 5.4	0.3
2	9 26 44.37	15 19 13.6	0.3	19	9 22 6.49	15 41 27.7	0.3
3	9 26 37.80	15 19 45.6	0.3	20	9 22 1.88	15 41 49.5	0.3
4	9 26 31.21	15 20 17.7	0.3	21	9 21 57.36	15 42 10.9	0.3
5	9 26 24.61	15 20 49.8	0.3	22	9 21 52.94	15 42 31.9	0.3
6	9 26 18.01	N.15 21 21.9	0.3	23	9 21 48.61	N.15 42 52.3	0.3
7	9 26 11.39	15 21 54.0	0.3	24	9 21 44.39	15 43 12.2	0.3
8	9 26 4.77	15 22 26.1	0.3	25	9 21 40.27	15 43 31.7	0.3
9	9 25 58.15	15 22 58.2	0.3	26	9 21 36.24	15 43 50.7	0.3
10	9 25 51.53	15 23 30.3	0.3	27	9 21 32.32	15 44 9.2	0.3
11	9 25 44.92	15 24 2.4	0.3	28	9 21 28.51	15 44 27.2	0.3
12	9 25 38.32	N.15 24 34.4	0.3	29	9 21 24.80	N.15 44 44.7	0.3
13	9 25 31.72	15 25 6.3	0.3	30	9 21 21.20	15 45 1.6	0.3
14	9 25 25.13	15 25 38.1	0.3	31	9 21 17.72	15 45 18.1	0.3
15	9 25 18.57	N.15 26 9.8	0.3	Apr. 1	9 21 14.34	N.15 45 34.0	0.3

AT TRANSIT AT GREENWICH.

Date.	Apparent Right Ascension.	Apparent Declination.	Hor. Par.	Date.	Apparent Right Ascension.	Apparent Declination.	Hor. Par.
	h m s	° ' "	"		h m s	° ' "	"
Apr. 2	9 21 11.08	N.15 45 49.4	0.3	May 8	9 20 35.66	N.15 48 39.3	0.3
3	9 21 7.93	15 46 4.2	0.3	9	9 20 37.05	15 48 32.9	0.3
4	9 21 4.90	15 46 18.5	0.3	10	9 20 38.57	15 48 26.0	0.3
5	9 21 1.98	15 46 32.3	0.3	11	9 20 40.23	15 48 18.4	0.3
6	9 20 59.17	15 46 45.6	0.3	12	9 20 42.01	15 48 10.3	0.3
7	9 20 56.49	15 46 58.2	0.3	13	9 20 43.91	15 48 1.6	0.3
8	9 20 53.92	N.15 47 10.3	0.3	14	9 20 45.95	N.15 47 52.3	0.3
9	9 20 51.48	15 47 21.8	0.3	15	9 20 48.12	15 47 42.4	0.3
10	9 20 49.16	15 47 32.8	0.3	16	9 20 50.41	15 47 31.9	0.3
11	9 20 46.97	15 47 43.2	0.3	17	9 20 52.82	15 47 20.8	0.3
12	9 20 44.90	15 47 52.9	0.3	18	9 20 55.36	15 47 9.1	0.3
13	9 20 42.95	15 48 2.1	0.3	19	9 20 58.02	15 46 56.9	0.3
14	9 20 41.12	N.15 48 10.8	0.3	20	9 21 0.80	N.15 46 44.1	0.3
15	9 20 39.42	15 48 18.8	0.3	21	9 21 3.71	15 46 30.8	0.3
16	9 20 37.85	15 48 26.3	0.3	22	9 21 6.74	15 46 16.9	0.3
17	9 20 36.39	15 48 33.1	0.3	23	9 21 9.89	15 46 2.4	0.3
18	9 20 35.07	15 48 39.4	0.3	24	9 21 13.16	15 45 47.3	0.3
19	9 20 33.87	15 48 45.0	0.3	25	9 21 16.55	15 45 31.7	0.3
20	9 20 32.80	N.15 48 50.1	0.3	26	9 21 20.07	N.15 45 15.5	0.3
21	9 20 31.86	15 48 54.6	0.3	27	9 21 23.70	15 44 58.8	0.3
22	9 20 31.05	15 48 58.6	0.3	28	9 21 27.45	15 44 41.5	0.3
23	9 20 30.36	15 49 1.9	0.3	29	9 21 31.32	15 44 23.7	0.3
24	9 20 29.81	15 49 4.7	0.3	30	9 21 35.30	15 44 5.3	0.3
25	9 20 29.38	15 49 6.8	0.3	31	9 21 39.41	15 43 46.4	0.3
26	9 20 29.08	N.15 49 8.3	0.3	June 1	9 21 43.62	N.15 43 26.9	0.3
27	9 20 28.91	15 49 9.2	0.3	2	9 21 47.95	15 43 7.0	0.3
28	9 20 28.86	15 49 9.4	0.3	3	9 21 52.39	15 42 46.5	0.3
29	9 20 28.95	15 49 9.1	0.3	4	9 21 56.94	15 42 25.4	0.2
30	9 20 29.17	15 49 8.3	0.3	5	9 22 1.61	15 42 3.8	0.3
May 1	9 20 29.53	15 49 6.8	0.3	6	9 22 6.38	15 41 41.8	0.3
2	9 20 30.01	N.15 49 4.7	0.3	7	9 22 11.26	N.15 41 19.2	0.3
3	9 20 30.62	15 49 1.9	0.3	8	9 22 16.25	15 40 56.1	0.3
4	9 20 31.37	15 48 58.6	0.3	9	9 22 21.34	15 40 32.6	0.3
5	9 20 32.24	15 48 54.7	0.3	10	9 22 26.54	15 40 8.5	0.3
6	9 20 33.25	15 48 50.1	0.3	11	9 22 31.84	N.15 39 44.0	0.3
7	9 20 34.39	N.15 48 45.0	0.3				

Date.	X, True Eq ^s of Date.		Red. to M. Eq ^s of 1924-0	Y, True Eq ^s of Date.		Red. to M. Eq ^s of 1924-0	Z, True Eq ^s of Date.		Red. to M. Eq ^s of 1924-0
	Noon.	Midnight.		Noon.	Midnight		Noon.	Midnight.	
Jan. 1	0°1676595	0°1762730	+ 330	0°8888512	0°8874468	+ 219	0°3854975	0°3848883	— 362
2	1848732	1934593	321	8859731	8844301	223	3842490	3835797	359
3	2020306	2105865	312	8828179	8811366	226	3828805	3821513	355
4	2191261	2276488	303	8793863	8775672	228	3813923	3806034	352
5	2361538	2446404	294	8756793	8737228	230	3797848	3789365	349
6	0°2531079	0°2615556	+ 285	0°8716980	0°8696049	+ 232	0°3780585	0°3771509	— 345
7	2699829	2783889	276	8674438	8652147	234	3762139	3752475	341
8	2867730	2951345	267	8629180	8605538	235	3742518	3732268	338
9	3034727	3117869	258	8581224	8556240	236	3721727	3710895	334
10	3200765	3283408	250	8530589	8504273	237	3699773	3688363	331
11	0°3365792	0°3447910	+ 241	0°8477295	0°8449657	+ 237	0°3676666	0°3664683	— 327
12	3529755	3611322	232	8421362	8392412	237	3652414	3639862	323
13	3692605	3773597	223	8362809	8332558	237	3627026	3613908	319
14	3854292	3934684	215	8301660	8270118	237	3600510	3586832	316
15	4014767	4094535	206	8237936	8205116	236	3572876	3558643	312
16	0°4173983	0°4253103	+ 198	0°8171660	0°8137572	+ 235	0°3544134	0°3529351	— 308
17	4331891	4410341	190	8102854	8067510	233	3514294	3498965	304
18	4488447	4566203	182	8031542	7994954	232	3483365	3467496	301
19	4643604	4720604	174	7957748	7919927	230	3451358	3434954	297
20	4797318	4873620	166	7881495	7842455	228	3418284	3401350	293
21	0°4949544	0°5025086	+ 158	0°7802809	0°7762561	+ 226	0°3384153	0°3366695	— 289
22	5100240	5175000	150	7721713	7680270	223	3348976	3330999	285
23	5249361	5323318	143	7638233	7595606	220	3312764	3294273	281
24	5396866	5469999	135	7552392	7508593	217	3275527	3256528	278
25	5542711	5614997	128	7464213	7419256	214	3237277	3217776	274
26	0°5686853	0°5758272	+ 121	0°7373724	0°7327620	+ 210	0°3198025	0°3178027	— 270
27	5829250	5899780	114	7280947	7233709	207	3157782	3137292	266
28	5969856	6039474	108	7185910	7137552	203	3116559	3095584	262
29	6108628	6177312	101	7088638	7039173	199	3074369	3052915	258
30	6245521	6313249	95	6989160	6938602	195	3031224	3009298	254
31	0°6380490	0°6447240	+ 88	0°6887504	0°6835869	+ 190	0°2987137	0°2964743	— 250
Feb. 1	6513492	6579240	82	6783702	6731006	186	2942119	2919266	246
2	6641480	6709206	76	6677785	6624044	181	2896186	2872881	242
3	6773412	6837094	71	6569787	6515019	176	2849352	2825602	238
4	6900245	6962860	65	6459744	6403966	171	2801632	2777445	234
5	0°7024935	0°7086464	+ 60	0°6347692	0°6290926	+ 166	0°2753042	0°2728426	— 230
6	7147443	7207866	55	6233672	6175935	161	2703598	2678561	226
7	7267730	7327030	50	6117721	6059034	156	2653316	2627866	222
8	7385762	7443920	45	5999880	5940264	150	2602214	2576361	218
9	7501501	7558500	40	5880191	5819665	144	2550310	2524063	214
10	0°7614913	0°7670737	+ 36	0°5758693	0°5697279	+ 139	0°2497621	0°2470987	— 210
11	7725967	7780600	32	5635429	5573148	133	2444164	2417153	206
12	7834632	7888059	28	5510440	5447311	127	2389957	2362578	202
13	7940877	7993083	24	5383766	5319811	121	2335019	2307281	198
14	8044674	8095646	20	5255450	5190689	115	2279367	2251279	194
15	0°8145995	0°8195718	+ 17	0°5125533	0°5059987	+ 109	0°2223019	0°2194590	— 190
	+	+		—	—		—	—	

SUN'S CO-ORDINATES, 1924.

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Date.	X, True Eq ^s of Date.		Red. to M. Eq ^s of 1924-0	Y, True Eq ^s of Date.		Red. to M. Eq ^s of 1924-0	Z, True Eq ^s of Date.		Red. to M. Eq ^s of 1924-0
	Noon.	Midnight.		Noon.	Midnight.		Noon.	Midnight.	
	+	+		-	-		-	-	
Feb. 16.	0-8244812	0-8293274	+ 14	0-4994056	0-4927746	+ 103	0-2165993	0-2137231	- 186
17	8341101	8388290	11	4861062	4794009	97	2108307	2079223	182
18	8434837	8480740	8	4726591	4658814	91	2049981	2020582	178
19	8525997	8570604	5	4590684	4522205	84	1991030	1961327	174
20	8614558	8657856	2	4453382	4384220	78	1931474	1901474	169
21	0-8700496	0-8742474	0	4314725	0-4244900	+ 72	0-1871330	0-1841043	- 165
22	8783788	8824435	2	4174752	4104285	65	1810616	1780050	161
23	8864413	8903719	4	4033505	3962415	59	1749349	1718514	157
24	8942349	8980300	6	3891022	3819330	53	1687548	1656452	153
25	9017570	9054156	8	3747344	3675070	46	1625229	1593882	149
26	0-9090055	0-9125263	9	0-3602513	0-3529678	+ 40	0-1562412	0-1530822	- 145
27	9159779	9193599	11	3456570	3383195	33	1499115	1467292	141
28	9226720	9259140	12	3309559	3235667	27	1435356	1403310	137
29	9290856	9321866	13	3161524	3087137	20	1371155	1338894	133
Mar. 1	9352166	9381754	13	3012512	2937653	14	1306530	1274066	129
2	0-9410627	0-9438784	14	0-2862568	0-2787262	7	0-1241504	0-1208846	- 124
3	9466222	9492939	15	2711742	2636013	+ 1	1176096	1143255	120
4	9518933	9544202	15	2560082	2483955	6	1110326	1077312	116
5	9568744	9592557	15	2407638	2331138	12	1044216	1011040	112
6	9615640	9637991	15	2254461	2177613	18	0977788	0944461	108
7	0-9659609	0-9680493	15	0-2100600	0-2023429	25	0-0911063	0-0877596	- 104
8	9700641	9720053	15	1946107	1868638	31	0844062	0810465	99
9	9738727	9756663	15	1791030	1713289	37	0776807	0743091	95
10	9773859	9790316	14	1635421	1557432	44	0709320	0675496	91
11	9806032	9821007	13	1479329	1401117	50	0641622	0607700	87
12	0-9835240	0-9848731	12	0-1322802	0-1244391	56	0-0573734	0-0539725	- 83
13	9861479	9873485	11	1165889	1087304	63	0505677	0471592	79
14	9884747	9895266	10	10008640	0929904	69	0437473	0403322	74
15	9905041	9914074	9	0851102	0772239	75	0369142	0334935	70
16	9922363	9929909	8	0693322	0614356	81	0300705	0266453	66
17	0-9936712	0-9942773	6	0-0535347	0-0456301	88	0-0232183	0-0197896	- 62
18	9948091	9952666	5	0377224	0298120	94	0163596	0129284	58
19	9956500	9959592	3	0218996	0139857	100	0094963	0060636	53
20	9961943	9963553	1	0060709	0018443	106	0026305	0008027	49
21	9964422	9964551	+ 1	0097593	0176736	112	0042359	0076688	45
22	0-9963939	0-9962587	4	0-0255868	0-0334982	118	0-0111011	0-0145326	- 41
23	9960495	9957663	6	0414074	0493137	124	0179631	0213923	36
24	9954092	9949781	8	0572166	0651155	130	0248200	0282460	32
25	9944732	9938944	11	0730099	0808993	136	0316700	0350917	28
26	9932417	9925152	14	0887831	0966607	142	0385110	0419275	24
27	0-9917148	0-9908407	+ 16	0-1045316	0-1123951	147	0-0453411	0-0487514	- 19
28	9898928	9888713	19	1202506	1280976	153	0521582	0555613	15
29	9877761	9866074	23	1359354	1437635	159	0589604	0623552	11
30	9853653	9840498	26	1515813	1593881	165	0657455	0691311	7
31	9826611	9811992	29	1671833	1749663	170	0725116	0788869	- 2
Apr. 1	0-9796642	0-9780563	+ 33	0-1827366	0-1904935	176	0-0792567	0-0826206	+ 2
	+	+		+	+		+	+	

Date.	X, True Eq ^s of Date.		Red. to M. Eq ^s of 1924.0	Y, True Eq ^s of Date.		Red. to M. Eq ^s of 1924.0	Z, True Eq ^s of Date.		Red. to M. Eq ^s of 1924.0
	Noon.	Midnight.		Noon.	Midnight.		Noon.	Midnight.	
	+	+		+	+		+	+	
Apr. 2	0° 9763756	0° 9746223	+ 36	0° 1982364	0° 2059646	- 182	0° 0859785	0° 0893300	+ 6
3	9727965	9708984	40	2136776	2213748	187	0926749	0960130	11
4	9689283	9668862	44	2290555	2367193	193	0993440	1026677	15
5	9647723	9625869	48	2443654	2519933	198	1059837	1092918	19
6	9603503	9580025	52	2596024	2671921	203	1125918	1158835	24
7	0° 9556039	0° 9531346	+ 57	0° 2747618	0° 2823110	- 209	0° 1191665	0° 1224407	+ 28
8	9505950	9479853	61	2898392	2973457	214	1257058	1289615	33
9	9453058	9425566	66	3048301	3122917	219	1322076	1354439	37
10	9397380	9368504	70	3197300	3271444	225	1386701	1418860	41
11	9338940	9308691	75	3345345	3418996	230	1450914	1482860	46
12	0° 9277761	0° 9246151	+ 80	0° 3492393	0° 3565530	- 235	0° 1514695	0° 1546418	+ 50
13	9213865	9180905	85	3638403	3711006	240	1578027	1609519	55
14	9147276	9112980	91	3783334	3855382	245	1640892	1672144	59
15	9078020	9042400	96	3927146	3998621	249	1703272	1734275	63
16	9006122	8969189	101	4069802	4140685	254	1765150	1795896	68
17	0° 8931606	0° 8893375	+ 107	0° 4211264	0° 4281536	- 259	0° 1826510	0° 1856991	+ 72
18	8854499	8814981	113	4351495	4421138	263	1887336	1917543	77
19	8774824	8734031	119	4490460	4559457	268	1947611	1977538	81
20	8692606	8650550	125	4628124	4696457	272	2007321	2036959	86
21	8607867	8564560	131	4764452	4832103	277	2066449	2095789	90
22	0° 8520631	0° 8476083	+ 138	0° 4899407	0° 4966358	- 281	0° 2124979	0° 2154016	+ 95
23	8430920	8385144	144	5032953	5099186	285	2182897	2211621	99
24	8338758	8291765	151	5165052	5230547	289	2240186	2268590	104
25	8244169	8195973	158	5295667	5360406	293	2296830	2324905	108
26	8147180	8097793	165	5424760	5488724	297	2352813	2380551	113
27	0° 8047817	0° 7997254	+ 172	0° 5552292	0° 5615460	- 300	0° 2408118	0° 2435511	+ 117
28	7946108	7894183	179	5678223	5740577	304	2462728	2489768	122
29	7842083	7789212	187	5802516	5864036	307	2516628	2543307	127
30	7735773	7681771	194	5925133	5985801	310	2569802	2596111	131
May 1	7627211	7572096	202	6046036	6105833	313	2622233	2648165	136
2	0° 7516430	0° 7460218	+ 210	0° 6165188	0° 6224096	- 316	0° 2673905	0° 2699453	+ 140
3	7403465	7346175	218	6282554	6340556	319	2724805	2749959	145
4	7288353	7230003	226	6398099	6455177	322	2774915	2799670	149
5	7171130	7111739	234	6511788	6567927	324	2824223	2848571	154
6	7051834	6991420	242	6623589	6678771	327	2872712	2896646	159
7	0° 6930503	0° 6869087	+ 251	0° 6733470	0° 6787681	- 329	0° 2920370	0° 2943883	+ 163
8	6807177	6744778	259	6841400	6894624	331	2967183	2990269	168
9	6681895	6618533	268	6947349	6999572	333	3013139	3035791	172
10	6554698	6490395	277	7051289	7102497	334	3058224	3080436	177
11	6425628	6360403	286	7153192	7203371	335	3102426	3124193	182
12	0° 6294725	0° 6228599	+ 295	0° 7253031	0° 7302169	- 337	0° 3145734	0° 3167049	+ 186
13	6162030	6095024	304	7350783	7398869	338	3188136	3208994	191
14	6027585	5959719	313	7446424	7493445	338	3229622	3250018	196
15	5891431	5822726	322	7539929	7585875	339	3270181	3290111	200
16	5753609	5684085	332	7631280	7676141	339	3309805	3329263	205
17	0° 5614159	0° 5543835	+ 341	0° 7720455	0° 7764220	- 339	0° 3348483	0° 3367465	+ 210
	+	+		+	+		+	+	

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Date.	X, True Eq ^s of Date.		Red. to M. Eq ^s of 1924-0	Y, True Eq ^s of Date.		Red. to M. Eq ^s of 1924-0	Z, True Eq ^s of Date.		Red. to M. Eq ^s of 1924-0
	Noon.	Midnight.		Noon.	Midnight.		Noon.	Midnight.	
	+	+		+	+		+	+	
May 18	0.5473118	0.5402013	+ 351	0.7807434	0.7850094	- 339	0.3386208	0.3404710	+ 214
19	.5330525	.5258659	361	.7892197	.7933741	339	.3422970	.3440987	219
20	.5186418	.5113808	371	.7974724	.8015142	338	.3458760	.3476288	224
21	.5040833	.4967499	380	.8054992	.8094273	337	.3493569	.3510602	228
22	.4893809	.4819769	390	.8132981	.8171113	336	.3527387	.3543922	233
23	0.4745383	0.4670657	+ 400	0.8208666	0.8245638	- 335	0.3560206	0.3576238	+ 238
24	.4595595	.4520203	410	.8282027	.8317829	333	.3592016	.3607539	242
25	.4444486	.4368449	420	.8353041	.8387661	331	.3622807	.3637818	247
26	.4292098	.4215437	430	.8421685	.8455111	329	.3652571	.3667065	252
27	.4138473	.4061211	441	.8487937	.8520160	326	.3681299	.3695271	256
28	0.3983656	0.3905815	+ 451	0.8551777	0.8582786	- 323	0.3708981	0.3722427	+ 261
29	.3827693	.3749296	461	.8613185	.8642970	320	.3735608	.3748524	266
30	.3670629	.3591698	471	.8672140	.8700693	317	.3761174	.3773556	270
31	.3512510	.3433070	481	.8728626	.8755938	313	.3785670	.3797515	275
June 1	.3353385	.3273460	491	.8782626	.8808688	309	.3809090	.3820393	280
2	0.3193302	0.3112916	+ 502	0.8834123	0.8858928	- 305	0.3831424	0.3842183	+ 284
3	.3032309	.2951486	512	.8883103	.8906645	300	.3852669	.3862881	289
4	.2870454	.2789219	522	.8929553	.8951825	295	.3872818	.3882480	293
5	.2707788	.2626165	532	.8973460	.8994456	290	.3891866	.3900975	298
6	.2544358	.2462373	542	.9014813	.9034529	284	.3909806	.3918360	303
7	0.2380216	0.2297893	+ 552	0.9053602	0.9072032	- 278	0.3926635	0.3934632	+ 307
8	.2215411	.2132775	562	.9080819	.9106961	272	.3942349	.3949786	312
9	.2049992	.1967068	572	.9123457	.9139307	266	.3956944	.3963821	316
10	.1884008	.1800819	581	.9154510	.9169065	259	.3970418	.3976734	321
11	.1717508	.1634080	591	.9182973	.9196232	252	.3982768	.3988521	325
12	0.1550540	0.1466895	+ 601	0.9208842	0.9220803	- 244	0.3993992	0.3999181	+ 330
13	.1383151	.1299313	610	.9232115	.9242778	236	.4004089	.4008715	335
14	.1215387	.1131379	619	.9252791	.9262154	228	.4013058	.4017119	339
15	.1047293	.0963136	628	.9270867	.9278930	220	.4020897	.4024393	343
16	.0878913	.0794629	638	.9286342	.9293104	211	.4027607	.4030537	348
17	0.0710290	0.0625900	+ 646	0.9299214	0.9304673	- 202	0.4033185	0.4035551	+ 352
18	.0541466	.0456992	655	.9309481	.9313636	193	.4037634	.4039433	357
19	.0372484	.0287948	664	.9317138	.9319988	183	.4040949	.4042181	361
20	.0203389	.0118813	672	.9322184	.9323726	173	.4043130	.4043796	365
21	.0034225	.0050369	681	.9324613	.9324846	163	.4044177	.4044274	370
22	0.0134964	0.0219553	+ 689	0.9324423	0.9323345	- 152	0.4044087	0.4043616	+ 374
23	.0304131	.0388692	697	.9321610	.9319219	141	.4042860	.4041820	378
24	.0473229	.0557736	704	.9316171	.9312466	130	.4040495	.4038886	383
25	.0642208	.0726638	712	.9308105	.9303087	119	.4036993	.4034815	387
26	.0811020	.0895349	719	.9297412	.9291081	107	.4032352	.4029605	391
27	0.0979618	0.1063820	+ 726	0.9284094	0.9276450	- 95	0.4026573	0.4023257	+ 395
28	.1147950	.1232000	733	.9268151	.9259196	83	.4019658	.4015774	399
29	.1315966	.1399841	739	.9249586	.9239322	70	.4011607	.4007156	404
30	.1483618	.1567291	745	.9228405	.9216835	57	.4002422	.3997406	408
July 1	.1650855	.1734302	751	.9204612	.9191738	44	.3992107	.3986525	412
2	0.1817627	0.1900822	+ 757	0.9178213	0.9164039	- 30	0.3980662	0.3974518	+ 416
	-	-		+	+		+	+	

Date.	X, True Eq ^s of Date.		Red. to M. Eq ^s of 1924.0	Y, True Eq ^s of Date.		Red. to M. Eq ^s of 1924.0	Z, True Eq ^s of Date.		Red. to M. Eq ^s of 1924.0
	Noon.	Midnight.		Noon.	Midnight.		Noon.	Midnight.	
July 3	—	—	+	+	—	—	+	+	+
	0.1983883	0.2066803	762	0.9149217	0.9133747	17	0.3968093	0.3961387	420
4	2149575	2232193	767	9117632	9100872	3	3954401	3947136	424
5	2314652	2396945	772	9083469	9065425	11	3939592	3931769	428
6	2479066	2561009	777	9046741	9027418	26	3923669	3915292	431
7	2642768	2724336	781	9007459	8986865	40	3906639	3897710	435
8	0.2805709	0.2886880	785	0.8965637	0.8943778	55	0.3888507	0.3879030	439
9	2967844	3048594	788	8921290	8898175	70	3869279	3859256	443
10	3129126	3209433	792	8874435	8850072	86	3848962	3838398	446
11	3289511	3369354	794	8825089	8799487	101	3827563	3816459	450
12	3448956	3528313	797	8773269	8746436	116	3805088	3793450	454
13	0.3607420	0.3686271	799	0.8718991	0.8690936	132	0.3781547	0.3769378	457
14	3764861	3843185	801	8662273	8633004	148	3756945	3744249	461
15	3921238	3999016	802	8603131	8572657	164	3731291	3718071	464
16	4076513	4153725	803	8541583	8509911	181	3704591	3690851	467
17	4230646	4307272	804	8477643	8444781	197	3676853	3662597	471
18	0.4383597	0.4459617	804	0.8411326	0.8377281	214	0.3648084	0.3633315	474
19	4535327	4610720	804	8342647	8307426	230	3618290	3603011	477
20	4685792	4760538	804	8271621	8235233	247	3587479	3571694	480
21	4834953	4909030	803	8198265	8160718	264	3555658	3539371	483
22	4982765	5056153	802	8122595	8083897	281	3522834	3506049	487
23	0.5129187	0.5201863	800	0.8044627	0.8004787	298	0.3489016	0.3471736	490
24	5274174	5346116	798	7964381	7923410	315	3454211	3436441	492
25	5417683	5488869	796	7881877	7839784	332	3418428	3400172	495
26	5559670	5630080	793	7797135	7753931	350	3381675	3362938	498
27	5700093	5769705	790	7710177	7665875	367	3343963	3324751	501
28	0.5838909	0.5907701	786	0.7621028	0.7575639	384	0.3305302	0.3285618	503
29	5976075	6044026	782	7529710	7483246	401	3265701	3245552	506
30	6111548	6178637	778	7436249	7388723	419	3225172	3204563	508
31	6245287	6311493	773	7340671	7292096	436	3183726	3162662	511
Aug. 1	6377250	6442553	768	7243003	7193395	454	3141374	3119862	513
2	0.6507396	0.6571775	762	0.7143275	0.7092648	471	0.3098129	0.3076175	515
3	6635685	6699121	756	7041517	6989886	488	3054003	3031614	517
4	6762078	6824552	750	6937759	6885141	505	3009009	2986191	519
5	6886538	6948031	743	6832035	6778445	523	2963161	2939921	521
6	7009028	7069524	736	6724376	6669831	540	2916472	2892817	523
7	0.7129514	0.7188995	728	0.6614815	0.6559333	557	0.2868958	0.2844896	525
8	7247962	7306412	720	6503388	6446985	574	2820632	2796169	527
9	7364341	7421745	711	6390127	6332819	591	2771509	2746653	529
10	7478620	7534963	703	6275065	6216869	607	2721603	2696361	530
11	7590769	7646036	693	6158235	6099168	624	2670929	2645309	532
12	0.7700759	0.7754936	684	0.6039671	0.5979749	641	0.2619502	0.2593510	533
13	7808564	7861638	674	5919406	5858645	657	2567334	2540977	534
14	7914155	7966111	663	5797469	5735883	673	2514441	2487727	536
15	8017503	8068328	653	5673891	5611497	689	2460837	2433773	537
16	8118581	8168260	642	5548704	5485517	705	2406536	2379128	538
17	0.8217360	0.8265879	630	0.5421939	0.5357974	721	0.2351550	0.2323805	539
	—	—		+	+		+	+	

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Date.	X, True Eq ^s of Date.		Red. to M. Eq ^s of 1924-0	Y, True Eq ^s of Date.		Red. to M. Eq ^s of 1924-0	Z, True Eq ^s of Date.		Red. to M. Eq ^s of 1924-0
	Noon.	Midnight.		Noon.	Midnight.		Noon.	Midnight.	
Aug. 18	—	—	+	+	+	+	+	—	+
19	0 8313812	0 8361155	618	0 5293627	0 5228901	737	0 2295894	0 2267819	539
20	8407905	8454058	606	5163800	5098329	752	2239582	2211185	540
21	8499610	8544558	593	5032491	4966291	768	2182629	2153916	541
22	8588898	8632627	580	4899734	4832824	783	2125049	2096029	541
23	8675740	8718234	567	4765565	4697962	798	2066859	2037539	542
24	8760105	8801350	554	4630020	4561743	812	2008072	1978461	542
25	8841965	8881947	540	4493135	4424202	827	1948707	1918812	542
26	8921293	8959999	525	4354949	4285380	841	1888778	1858607	542
27	8998062	9035479	511	4215500	4145314	855	1828302	1797865	542
28	9072245	9108358	496	4074828	4004046	869	1767297	1736601	542
29	9143814	9178611	481	3932974	3861617	882	1705780	1674835	542
30	9212746	9246215	465	3789980	3718069	895	1643768	1612583	541
31	9279016	9311145	449	3645888	3573444	908	1581281	1549864	541
Sept. 1	9342600	9373379	433	3500741	3427786	921	1518335	1486696	540
2	9403478	9432895	417	3354584	3281141	934	1454950	1423099	539
3	9461629	9489677	400	3207463	3133555	946	1391146	1359093	539
4	9517036	9543705	383	3059423	2985072	958	1326942	1294606	538
5	9569682	9594965	366	2910509	2835739	969	1262357	1229928	537
6	9619553	9643444	348	2760767	2685600	980	1197412	1164810	535
7	9666636	9689128	330	2610243	2534701	991	1132125	1099360	534
8	9710919	9732007	312	2458980	2383085	1002	1066516	1033597	533
9	9752390	9772069	294	2307022	2230795	1013	1000604	0967540	531
10	9791041	9809305	276	2154411	2077874	1023	0933408	0901210	529
11	9826861	9843707	257	2001190	1924364	1032	0867947	0834623	527
12	9859841	9875264	238	1847402	1770308	1042	0801239	0767798	525
13	9889973	9903967	219	1693087	1615744	1051	0734302	0700754	523
14	9917246	9929808	200	1538284	1460713	1060	0667155	0633508	521
15	9941652	9952776	180	1383035	1305256	1069	0599815	0566079	519
16	9963180	9972863	160	1227382	1149417	1077	0532301	0498484	516
17	9981822	9990057	140	1071367	0993236	1085	0464630	0430742	513
18	9997566	1 0004349	120	0915030	0836754	1092	0396822	0362872	511
19	1 0010404	0015730	100	0758415	0680017	1100	0328895	0294893	508
20	0020327	0024193	80	0601567	0523070	1107	0260869	0226825	505
21	0027327	0029729	59	0444531	0365956	1113	0192762	0158684	502
22	0031397	0032331	38	0287351	0208721	1119	0124593	0090492	498
23	0032530	0031993	17	0130073	0051412	1125	0056383	0022269	495
24	0030720	0028710	4	0027257	0105927	1131	0011847	0045965	491
25	0025963	0024478	25	0184592	0263246	1136	0080080	0114190	488
26	0018254	0013291	46	0341884	0420499	1141	0148293	0182386	484
27	0007590	00001149	67	0499085	0577636	1146	0216467	0250533	480
28	9993969	9986050	89	0656145	0734607	1150	0284581	0318609	476
29	9977392	9967995	111	0813016	0891364	1154	0352613	0386591	472
30	9957860	9946987	132	0969646	1047856	1157	0420541	0454460	467
Oct. 1	9935377	9923030	154	1125987	1204033	1161	0488345	0522194	463
2	9909947	9896130	176	1281987	1359843	1163	0556004	0589771	458
3	9881579	9866296	198	1437596	1515239	1166	0623494	0657169	453

Date.	X, True Eq ^s of Date.		Red. to M. Eq ^s of 1924.0	Y, True Eq ^s of Date.		Red. to M. Eq ^s of 1924.0	Z, True Eq ^s of Date.		Red. to M. Eq ^s of 1924.0
	Noon.	Midnight.	Noon.	Noon.	Midnight.	Noon.	Noon.	Midnight.	Noon.
Oct. 3	0.9850282	0.9833538	— 220	0.1592766	0.1670171	+ 1168	0.0690795	0.0724368	+ 448
4	.9816066	.9797867	242	.1747449	.1824593	1170	.0757887	.0791348	443
5	.9778943	.9759296	265	.1901598	.1978458	1172	.0824749	.0858088	438
6	.9738927	.9717838	287	.2055168	.2131722	1173	.0891361	.0924567	433
7	.9696030	.9673505	309	.2208114	.2284339	1174	.0957703	.0990767	427
8	0.9650265	0.9626312	— 332	0.2360392	0.2436267	+ 1174	0.1023756	0.1056668	+ 421
9	.9601648	.9576274	354	.2511958	.2587461	1174	.1089500	.1122251	416
10	.9550191	.9523402	377	.2662771	.2737882	1174	.1154917	.1187497	410
11	.9495909	.9467712	399	.2812789	.2887487	1173	.1219989	.1252389	404
12	.9438814	.9409217	422	.2961971	.3036235	1172	.1284696	.1316907	397
13	0.9378922	0.9347931	— 445	0.3110275	0.3184084	+ 1171	0.1349021	0.1381035	+ 391
14	.9316245	.9283867	467	.3257658	.3330991	1169	.1412946	.1444752	385
15	.9250798	.9217040	490	.3404077	.3476912	1167	.1476451	.1508041	378
16	.9182595	.9147465	513	.3549491	.3621807	1165	.1539519	.1570883	371
17	.9111652	.9075158	535	.3693856	.3765632	1163	.1602130	.1633259	365
18	0.9037985	0.9000135	— 558	0.3837129	0.3908343	+ 1160	0.1664267	0.1695151	+ 358
19	.8961610	.8922413	581	.3979267	.4049896	1156	.1725909	.1756540	350
20	.8882546	.8842011	604	.4120225	.4190248	1152	.1787040	.1817407	343
21	.8800811	.8758948	626	.4259959	.4329353	1148	.1847639	.1877733	336
22	.8716424	.8673242	649	.4398425	.4467169	1144	.1907687	.1937499	328
23	0.8629405	0.8584916	— 672	0.4535579	0.4603650	+ 1139	0.1967167	0.1996687	+ 320
24	.8539777	.8493991	694	.4671377	.4738753	1134	.2026058	.2055277	313
25	.8447562	.8400492	717	.4805773	.4872431	1128	.2084341	.2113249	305
26	.8352784	.8304443	740	.4938722	.5004640	1122	.2141998	.2170586	297
27	.8255471	.8205872	762	.5070179	.5135333	1116	.2199010	.2227267	288
28	0.8155649	0.8104807	— 785	0.5200097	0.5264466	+ 1110	0.2255355	0.2283272	+ 280
29	.8053350	.8001281	807	.5328435	.5391997	1103	.2311016	.2338584	272
30	.7948605	.7895325	830	.5455148	.5517882	1095	.2365974	.2393184	263
31	.7841447	.7786975	852	.5580195	.5642081	1087	.2420211	.2447054	254
Nov. 1	.7731913	.7676266	875	.5703535	.5764553	1079	.2473710	.2500177	245
2	0.7620038	0.7563234	— 897	0.5825130	0.5885262	+ 1071	0.2526453	0.2552536	+ 236
3	.7505858	.7447915	919	.5944943	.6004170	1062	.2578423	.2604114	227
4	.7389410	.7330347	941	.6062938	.6121243	1053	.2629606	.2654897	218
5	.7270730	.7210565	963	.6179081	.6236448	1043	.2679986	.2704870	209
6	.7149855	.7088605	985	.6293339	.6349751	1033	.2729547	.2754016	199
7	0.7026820	0.6964505	— 1007	0.6405679	0.6461120	+ 1022	0.2778276	0.2802324	+ 190
8	.6901663	.6838299	1029	.6516069	.6570523	1012	.2826158	.2849777	180
9	.6774418	.6710025	1051	.6624477	.6677928	1001	.2873179	.2896363	170
10	.6645123	.6579717	1072	.6730872	.6783305	990	.2919326	.2942067	161
11	.6513812	.6447412	1094	.6835222	.6886621	978	.2964585	.2986877	151
12	0.6380522	0.6313146	— 1115	0.6937497	0.6987846	+ 964	0.3008942	0.3030778	+ 141
13	.6245290	.6176957	1136	.7037664	.7086948	951	.3052383	.3073756	130
14	.6108153	.6038882	1157	.7135693	.7183896	938	.3094896	.3115800	120
15	.5969149	.5898958	1178	.7231553	.7278659	925	.3136467	.3156895	110
16	.5828315	.5757225	1199	.7325212	.7371207	911	.3177083	.3197029	99
17	0.5685692	0.5613721	— 1219	0.7416641	0.7461510	+ 896	0.3216731	0.3236187	+ 89

SUN'S CO-ORDINATES, 1924.

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Date.	X, True Eq ^s of Date.		Red. to M. Eq ^s of 1924.0	Y, True Eq ^s of Date.		Red. to M. Eq ^s of 1924.0	Z, True Eq ^s of Date.		Red. to M. Eq ^s of 1924.0
	Noon.	Midnight.		Noon.	Midnight.		Noon.	Midnight.	
Nov. 18	0° 5541318	0° 5468488	-1239	0° 7505809	0° 7549535	+ 881	0° 3255397	0° 3274358	+ 78
19	° 5395235	° 5321565	1260	° 7592684	° 7635253	866	° 3293069	° 3311528	67
20	° 5247483	° 5172995	1280	° 7677238	° 7718635	850	° 3329734	° 3347685	57
21	° 5098105	° 5022819	1299	° 7759440	° 7799650	834	° 3365380	° 3382816	46
22	° 4947143	° 4871083	1319	° 7839261	° 7878268	817	° 3399993	° 3416909	35
23	0° 4794644	0° 4717832	-1338	0° 7916669	0° 7954460	+ 800	0° 3433562	0° 3449951	+ 24
24	° 4640654	° 4563114	1357	° 7991638	° 8028198	783	° 3466074	° 3481930	12
25	° 4485219	° 4406975	1376	° 8064137	° 8099452	765	° 3497517	° 3512834	1
26	° 4328390	° 4249469	1395	° 8134140	° 8168198	747	° 3527879	° 3542651	- 10
27	° 4170219	° 4090646	1413	° 8201622	° 8234410	728	° 3557149	° 3571371	22
28	0° 4010758	0° 3930560	-1431	0° 8266558	0° 8298065	+ 709	0° 3585316	0° 3598984	- 33
29	° 3850060	° 3769264	1449	° 8328927	° 8359143	689	° 3612372	° 3625480	45
30	° 3688178	° 3606810	1467	° 8388709	° 8417624	669	° 3638306	° 3650850	56
Dec. 1	° 3525167	° 3443254	1484	° 8445886	° 8473493	649	° 3663111	° 3675087	68
2	° 3361078	° 3278647	1501	° 8500443	° 8526734	628	° 3686779	° 3698185	80
3	0° 3195967	0° 3113043	-1517	0° 8552364	0° 8577332	+ 607	0° 3709304	0° 3720136	- 91
4	° 3029882	° 2946491	1534	° 8601637	° 8625276	585	° 3730680	° 3740935	103
5	° 2862876	° 2779044	1550	° 8648247	° 8670550	563	° 3750900	° 3760575	115
6	° 2695001	° 2610752	1565	° 8692183	° 8713145	540	° 3769959	° 3779052	127
7	° 2526305	° 2441665	1580	° 8733434	° 8753049	517	° 3787852	° 3796360	139
8	0° 2356839	0° 2271833	-1595	0° 8771989	0° 8790251	+ 494	0° 3804574	0° 3812494	- 151
9	° 2186654	° 2101307	1609	° 8807835	° 8824739	470	° 3820120	° 3827451	163
10	° 2015798	° 1930135	1623	° 8840963	° 8856505	446	° 3834486	° 3841225	175
11	° 1844323	° 1758369	1637	° 8871363	° 8885536	421	° 3847667	° 3853812	187
12	° 1672278	° 1586057	1650	° 8899024	° 8911825	396	° 3859660	° 3865209	199
13	0° 1499713	0° 1413251	-1663	0° 8923938	0° 8935362	+ 371	0° 3870460	0° 3875411	- 211
14	° 1326679	° 1240002	1675	° 8946095	° 8956137	345	° 3880063	° 3884415	223
15	° 1153227	° 1066359	1687	° 8965486	° 8974142	319	° 3888467	° 3892218	235
16	° 0979406	° 0892374	1698	° 8982104	° 8989370	292	° 3895667	° 3898815	247
17	° 0805270	° 0718100	1709	° 8995939	° 9001812	266	° 3901662	° 3904206	259
18	0° 0630870	0° 0543587	-1720	0° 9006986	0° 9011461	+ 238	0° 3906447	0° 3908385	- 272
19	° 0456258	° 0368889	1729	° 9015237	° 9018312	211	° 3910020	° 3911352	284
20	° 0281488	° 0194060	1739	° 9020685	° 9022356	183	° 3912380	° 3913103	296
21	° 0106613	° 0019155	1748	° 9023325	° 9023590	154	° 3913522	° 3913636	308
22	° 0068309	° 0155771	1756	° 9023151	° 9022008	126	° 3913445	° 3912950	320
23	0° 0243225	0° 0330662	-1764	0° 9020160	0° 9017607	+ 97	0° 3912149	0° 3911043	- 332
24	° 0418076	° 0505459	1771	° 9014348	° 9010384	67	° 3909631	° 3907913	345
25	° 0592803	° 0680101	1777	° 9005715	° 9000341	38	° 3905890	° 3903562	357
26	° 0767346	° 0854531	1783	° 8994263	° 8987481	+ 8	° 3900929	° 3897991	369
27	° 0941648	° 1028690	1789	° 8979995	° 8971806	- 22	° 3894748	° 3891200	381
28	0° 1115650	0° 1202520	-1794	0° 8962915	0° 8953323	- 53	0° 3887348	0° 3883192	- 393
29	° 1289293	° 1375963	1798	° 8943032	° 8932042	84	° 3878732	° 3873969	405
30	° 1462521	° 1548961	1801	° 8920356	° 8907974	115	° 3868904	° 3863537	417
31	° 1635277	° 1721461	1804	° 8894898	° 8881129	146	° 3857868	° 3851899	429
32	0° 1807507	0° 1893408	-1807	0° 8866668	0° 8851518	- 177	0° 3839563	0° 3839062	- 440
	+	+		-	-		-	-	

198 PRECESSION, NUTATION, &C., 1924.

Mean Noon.	LONGITUDE.			Appar- ent Obliqui- ty.	OBLIQUITY.			Mean Noon.	LONGITUDE.			Appar- ent Obliqui- ty.	OBLIQUITY.			
	Pre- cession from 1924.0	Nutation.			Nutation.		Pre- cession from 1924.0		Nutation.		Nutation.					
		ΔL	$d L$		$\Delta \omega$	$d \omega$			ΔL	$d L$	$\Delta \omega$		$d \omega$			
		—		23° 26'	—					—		23° 26'	—			
Jan.	1	— 0.02	7.01	— 20	48.08	8.94	+ 04	Feb.	16	6.31	6.83	— 02	48.95	8.00	— 07	
	2	+ 0.12	6.98	— 21	48.09	8.93	— 00		17	6.45	6.86	+ 06	48.98	7.98	— 06	
	3	0.26	6.95	— 17	48.10	8.92	— 04		18	6.59	6.89	+ 10	49.00	7.96	— 04	
	4	0.40	6.92	— 09	48.11	8.90	— 07		19	6.73	6.93	+ 13	49.02	7.94	— 01	
	5	0.53	6.89	+ 01	48.12	8.89	— 08		20	6.86	6.96	+ 12	49.04	7.92	+ 03	
	6	0.67	6.86	+ 12	48.13	8.88	— 07		21	7.00	7.00	+ 08	49.06	7.90	+ 06	
	7	0.81	6.83	+ 20	48.14	8.86	— 05		22	7.14	7.04	+ 01	49.07	7.88	+ 08	
	8	0.95	6.81	+ 24	48.16	8.85	— 01		23	7.28	7.08	— 07	49.09	7.86	+ 08	
	9	1.08	6.78	+ 23	48.17	8.84	+ 02		24	7.41	7.12	— 15	49.11	7.84	+ 06	
	10	1.22	6.76	+ 19	48.19	8.82	+ 05		25	7.55	7.16	— 19	49.13	7.82	+ 03	
	11	1.36	6.73	+ 13	48.20	8.80	+ 07		26	7.69	7.21	— 19	49.15	7.80	— 01	
	12	1.50	6.71	+ 05	48.22	8.78	+ 07		27	7.83	7.25	— 14	49.16	7.78	— 05	
	13	1.63	6.69	— 03	48.23	8.77	+ 06		28	7.96	7.30	— 05	49.18	7.76	— 07	
	14	1.77	6.67	— 09	48.25	8.75	+ 04		29	8.10	7.35	+ 05	49.20	7.75	— 08	
	15	1.91	6.65	— 13	48.27	8.73	+ 02		Mar.	1	8.24	7.39	+ 14	49.21	7.73	— 06
	16	2.05	6.63	— 15	48.29	8.71	— 01			2	8.38	7.44	+ 21	49.23	7.71	— 04
	17	2.18	6.62	— 14	48.31	8.69	— 03			3	8.51	7.49	+ 23	49.24	7.70	— 00
	18	2.32	6.60	— 11	48.32	8.67	— 06			4	8.65	7.54	+ 21	49.25	7.68	+ 03
	19	2.46	6.59	— 06	48.34	8.65	— 07			5	8.79	7.59	+ 16	49.27	7.67	+ 05
	20	2.60	6.58	— 00	48.36	8.63	— 07			6	8.93	7.65	+ 08	49.28	7.65	+ 07
	21	2.73	6.56	+ 06	48.38	8.61	— 06			7	9.07	7.70	— 00	49.29	7.64	+ 07
	22	2.87	6.55	+ 11	48.40	8.59	— 03			8	9.20	7.75	— 07	49.30	7.63	+ 05
	23	3.01	6.55	+ 13	48.42	8.56	— 00			9	9.34	7.81	— 12	49.31	7.62	+ 03
	24	3.15	6.54	+ 12	48.45	8.54	+ 04			10	9.48	7.86	— 15	49.32	7.60	+ 01
	25	3.29	6.54	+ 06	48.47	8.52	+ 06			11	9.62	7.92	— 16	49.33	7.59	— 02
	26	3.42	6.53	— 03	48.49	8.50	+ 08			12	9.75	7.98	— 14	49.34	7.58	— 04
	27	3.56	6.53	— 11	48.51	8.47	+ 07			13	9.89	8.03	— 10	49.35	7.57	— 06
	28	3.70	6.53	— 18	48.53	8.45	+ 05			14	10.03	8.09	— 05	49.36	7.57	— 07
	29	3.84	6.53	— 21	48.55	8.43	+ 02			15	10.17	8.15	+ 01	49.37	7.56	— 07
	30	3.97	6.53	— 19	48.58	8.40	— 02		16	10.30	8.21	+ 07	49.37	7.55	— 05	
31	4.11	6.54	— 12	48.60	8.38	— 06	17	10.44	8.26	+ 11	49.38	7.54	— 02			
Feb.	1	4.25	6.54	— 03	48.62	8.36	— 07	18	10.58	8.32	+ 12	49.38	7.54	+ 01		
	2	4.39	6.55	+ 07	48.64	8.33	— 07	19	10.72	8.38	+ 09	49.39	7.53	+ 05		
	3	4.52	6.56	+ 16	48.67	8.31	— 05	20	10.85	8.44	+ 03	49.39	7.53	+ 07		
	4	4.66	6.57	+ 22	48.69	8.28	— 02	21	10.99	8.50	— 05	49.39	7.52	+ 08		
	5	4.80	6.58	+ 23	48.71	8.26	+ 01	22	11.13	8.56	— 12	49.39	7.52	+ 07		
	6	4.94	6.60	+ 20	48.73	8.24	+ 04	23	11.27	8.61	— 17	49.40	7.52	+ 04		
	7	5.07	6.61	+ 14	48.76	8.21	+ 06	24	11.40	8.67	— 19	49.40	7.51	— 00		
	8	5.21	6.63	+ 06	48.78	8.19	+ 07	25	11.54	8.73	— 15	49.40	7.51	— 04		
	9	5.35	6.65	— 01	48.80	8.17	+ 06	26	11.68	8.79	— 07	49.40	7.51	— 07		
	10	5.49	6.67	— 08	48.82	8.14	+ 05	27	11.82	8.84	+ 03	49.40	7.51	— 08		
	11	5.62	6.69	— 13	48.85	8.12	+ 03	28	11.95	8.90	+ 13	49.39	7.51	— 07		
	12	5.76	6.72	— 15	48.87	8.09	— 00	29	12.09	8.96	+ 20	49.39	7.51	— 05		
	13	5.90	6.74	— 15	48.89	8.07	— 03	30	12.23	9.01	+ 24	49.39	7.51	— 01		
	14	6.04	6.77	— 13	48.91	8.05	— 05	31	12.37	9.07	+ 23	49.38	7.52	+ 02		
	15	6.18	6.80	— 08	48.93	8.03	— 06	Apr.	1	12.51	9.12	+ 18	49.38	7.52	+ 05	
	16	6.31	6.83	— 02	48.95	8.00	— 07		2	12.64	9.18	+ 11	49.38	7.52	+ 07	

PRECESSION, NUTATION, &c., 1924. 199

Mean Noon.	LONGITUDE.			Appar- ent Obliqui- ty.	OBLIQUITY.			Mean Noon.	LONGITUDE.			Appar- ent Obliqui- ty.	OBLIQUITY.			
	Pre- cession from 1924·0	Nutation.			Nutation.	Pre- cession from 1924·0	Nutation.		Nutation.							
		ΔL	$d L$				$\Delta \omega$			$d \omega$	ΔL		$d L$	$\Delta \omega$	$d \omega$	
		—		23° 26'	—					—		23° 26'	—			
Apr.	2	12·64	9·18	+·11	49·38	7·52	+·07	May	18	18·97	10·47	—·20	48·79	8·05	—·01	
	3	12·78	9·23	+·03	49·37	7·53	+·07		19	19·11	10·46	—·15	48·78	8·06	—·05	
	4	12·92	9·28	—·05	49·36	7·53	+·06		20	19·25	10·46	—·05	48·76	8·07	—·07	
	5	13·06	9·34	—·10	49·36	7·54	+·04		21	19·39	10·45	+·06	48·75	8·08	—·08	
	6	13·19	9·39	—·14	49·35	7·54	+·02		22	19·52	10·44	+·16	48·74	8·10	—·07	
	7	13·33	9·44	—·16	49·34	7·55	—·01		23	19·66	10·43	+·23	48·73	8·11	—·04	
	8	13·47	9·49	—·15	49·34	7·56	—·04		24	19·80	10·42	+·26	48·72	8·12	·00	
	9	13·61	9·54	—·11	49·33	7·56	—·06		25	19·94	10·41	+·24	48·71	8·13	+·03	
	10	13·74	9·58	—·07	49·32	7·57	—·07		26	20·07	10·40	+·19	48·69	8·14	+·06	
	11	13·88	9·63	—·01	49·31	7·58	—·07		27	20·21	10·39	+·11	48·68	8·14	+·07	
	12	14·02	9·68	+·05	49·30	7·59	—·06		28	20·35	10·38	+·02	48·67	8·15	+·07	
	13	14·16	9·72	+·09	49·29	7·60	—·03		29	20·49	10·36	—·05	48·67	8·16	+·06	
	14	14·29	9·77	+·11	49·28	7·61	·00		30	20·62	10·35	—·10	48·66	8·17	+·03	
	15	14·43	9·81	+·09	49·26	7·62	+·03		31	20·76	10·33	—·13	48·65	8·18	·00	
	16	14·57	9·85	+·04	49·25	7·63	+·06		June	1	20·90	10·31	—·14	48·64	8·18	—·02
	17	14·71	9·89	—·04	49·24	7·64	+·08			2	21·04	10·29	—·12	48·63	8·19	—·05
	18	14·84	9·93	—·12	49·23	7·65	+·07			3	21·17	10·28	—·08	48·63	8·19	—·06
	19	14·98	9·97	—·18	49·22	7·66	+·05			4	21·31	10·26	—·03	48·62	8·20	—·07
20	15·12	10·00	—·20	49·20	7·67	+·02	5	21·45		10·24	+·03	48·61	8·21	—·07		
21	15·26	10·04	—·17	49·19	7·69	—·02	6	21·59		10·21	+·08	48·61	8·21	—·05		
22	15·40	10·07	—·10	49·18	7·70	—·06	7	21·73		10·19	+·10	48·60	8·21	—·02		
23	15·53	10·10	·00	49·16	7·71	—·08	8	21·86		10·17	+·10	48·60	8·22	+·01		
24	15·67	10·14	+·11	49·15	7·72	—·08	9	22·00		10·15	+·06	48·59	8·22	+·05		
25	15·81	10·17	+·20	49·13	7·74	—·06	10	22·14		10·12	·00	48·59	8·22	+·07		
26	15·95	10·20	+·25	49·12	7·75	—·03	11	22·28		10·10	—·09	48·59	8·22	+·08		
27	16·08	10·22	+·26	49·10	7·76	+·01	12	22·41		10·07	—·17	48·59	8·22	+·07		
28	16·22	10·25	+·22	49·09	7·78	+·04	13	22·55		10·05	—·22	48·58	8·22	+·04		
29	16·36	10·27	+·15	49·07	7·79	+·06	14	22·69		10·02	—·23	48·58	8·22	+·01		
30	16·50	10·29	+·07	49·06	7·81	+·07	15	22·83		10·00	—·19	48·58	8·22	—·03		
May	1	16·63	10·32	—·01	49·04	7·82	+·06	16		22·96	9·97	—·11	48·58	8·22	—·06	
	2	16·77	10·34	—·08	49·03	7·83	+·05	17		23·10	9·95	·00	48·59	8·22	—·08	
	3	16·91	10·35	—·13	49·01	7·85	+·02	18		23·24	9·92	+·11	48·59	8·21	—·07	
	4	17·05	10·37	—·15	48·99	7·86	·00	19	23·38	9·89	+·20	48·59	8·21	—·05		
	5	17·18	10·39	—·14	48·98	7·88	—·03	20	23·51	9·87	+·25	48·59	8·21	—·01		
	6	17·32	10·40	—·12	48·97	7·89	—·05	21	23·65	9·84	+·25	48·60	8·20	+·02		
	7	17·46	10·42	—·08	48·95	7·90	—·07	22	23·79	9·82	+·21	48·60	8·20	+·05		
	8	17·60	10·43	—·02	48·93	7·92	—·07	23	23·93	9·79	+·14	48·60	8·19	+·07		
	9	17·73	10·44	+·03	48·92	7·93	—·06	24	24·06	9·76	+·05	48·61	8·18	+·07		
	10	17·87	10·44	+·08	48·91	7·95	—·04	25	24·20	9·74	—·02	48·61	8·18	+·06		
	11	18·01	10·45	+·10	48·89	7·96	—·01	26	24·34	9·71	—·08	48·62	8·17	+·04		
	12	18·15	10·46	+·09	48·88	7·97	+·02	27	24·48	9·68	—·12	48·63	8·16	+·01		
	13	18·29	10·46	+·04	48·86	7·99	+·06	28	24·62	9·66	—·13	48·64	8·15	—·01		
	14	18·42	10·47	—·03	48·85	8·00	+·08	29	24·75	9·63	—·11	48·64	8·14	—·04		
	15	18·56	10·47	—·10	48·83	8·01	+·08	30	24·89	9·61	—·08	48·65	8·13	—·06		
	16	18·70	10·47	—·18	48·82	8·02	+·06	July	1	25·03	9·58	—·03	48·66	8·12	—·07	
	17	18·84	10·47	—·21	48·80	8·04	+·03		2	25·17	9·56	+·02	48·67	8·11	—·07	
	18	18·97	10·47	—·20	48·79	8·05	—·01		3	25·30	9·54	+·07	48·68	8·10	—·06	

200 PRECESSION, NUTATION, &c., 1924.

Mean Noon.	LONGITUDE.			Appar- ent Obliq- uity.	OBLIQUITY.			Mean Noon.	LONGITUDE.			Appar- ent Obliq- uity.	OBLIQUITY.			
	Pre- cession from 1924·0	Nutation.			Nutation.	Mean Noon.	Pre- cession from 1924·0		Nutation.		Nutation.					
		ΔL	$d L$						$\Delta \omega$	$d \omega$			ΔL	$d L$	$\Delta \omega$	$d \omega$
		—		23° 26'	—				—			23° 26'	—			
July	3	25·30	9·54	+·07	48·68	8·10	—·06	Aug. 18	31·63	9·54	+·01	49·56	7·16	+·07		
	4	25·44	9·51	+·11	48·69	8·09	—·03		19	31·77	9·57	—·05	49·58	7·14	+·05	
	5	25·58	9·49	+·12	48·70	8·07	—·00		20	31·91	9·60	—·10	49·60	7·12	+·03	
	6	25·72	9·47	+·09	48·72	8·06	+·04		21	32·05	9·63	—·13	49·62	7·10	—·00	
	7	25·85	9·45	+·03	48·73	8·05	+·06		22	32·18	9·66	—·12	49·64	7·07	—·03	
	8	25·99	9·43	—·05	48·74	8·03	+·08		23	32·32	9·70	—·10	49·66	7·05	—·05	
	9	26·13	9·41	—·14	48·76	8·02	+·08		24	32·46	9·74	—·06	49·68	7·03	—·06	
	10	26·27	9·39	—·21	48·77	8·00	+·06		25	32·60	9·77	—·01	49·70	7·01	—·07	
	11	26·40	9·37	—·24	48·79	7·98	+·02		26	32·73	9·81	+·05	49·72	6·99	—·07	
	12	26·54	9·35	—·22	48·80	7·97	—·02		27	32·87	9·85	+·10	49·74	6·97	—·05	
	13	26·68	9·34	—·16	48·82	7·95	—·06		28	33·01	9·89	+·13	49·76	6·95	—·02	
	14	26·82	9·32	—·06	48·83	7·94	—·08		29	33·15	9·93	+·13	49·78	6·93	+·01	
	15	26·95	9·31	+·06	48·85	7·92	—·08		30	33·28	9·98	+·09	49·80	6·91	+·05	
	16	27·09	9·29	+·16	48·87	7·90	—·06		31	33·42	10·02	+·03	49·81	6·89	+·07	
	17	27·23	9·28	+·22	48·88	7·88	—·03	Sept. 1	33·56	10·07	—·05	49·83	6·87	+·08		
	18	27·37	9·27	+·24	48·90	7·86	+·01		2	33·70	10·11	—·14	49·84	6·86	+·07	
	19	27·51	9·26	+·22	48·92	7·84	+·04		3	33·84	10·16	—·20	49·86	6·84	+·05	
	20	27·64	9·25	+·16	48·94	7·82	+·06		4	33·97	10·21	—·22	49·88	6·82	+·01	
	21	27·78	9·24	+·08	48·96	7·80	+·07		5	34·11	10·26	—·19	49·89	6·81	—·03	
	22	27·92	9·24	—·00	48·98	7·78	+·07		6	34·25	10·31	—·12	49·91	6·79	—·06	
	23	28·06	9·23	—·06	49·00	7·76	+·05		7	34·39	10·36	—·02	49·92	6·78	—·08	
	24	28·19	9·22	—·11	49·02	7·74	+·02		8	34·52	10·41	+·08	49·93	6·76	—·08	
	25	28·33	9·22	—·13	49·04	7·72	—·04		9	34·66	10·46	+·17	49·95	6·75	—·05	
	26	28·47	9·22	—·12	49·06	7·69	—·03		10	34·80	10·51	+·22	49·96	6·73	—·02	
	27	28·61	9·22	—·09	49·08	7·67	—·05		11	34·94	10·56	+·22	49·97	6·72	+·02	
	28	28·74	9·22	—·05	49·10	7·65	—·07		12	35·07	10·62	+·18	49·98	6·71	+·05	
	29	28·88	9·22	+·01	49·12	7·63	—·07		13	35·21	10·67	+·11	49·99	6·70	+·07	
	30	29·02	9·22	+·07	49·14	7·60	—·06		14	35·35	10·73	+·03	50·00	6·69	+·07	
	31	29·16	9·23	+·11	49·16	7·58	—·04		15	35·49	10·78	—·04	50·01	6·67	+·06	
Aug.	1	29·29	9·23	+·13	49·19	7·56	—·01	16	35·62	10·84	—·10	50·02	6·66	+·04		
	2	29·43	9·24	+·12	49·21	7·53	+·02	17	35·76	10·89	—·13	50·03	6·65	+·01		
	3	29·57	9·25	+·07	49·23	7·51	+·06	18	35·90	10·95	—·13	50·04	6·65	—·02		
	4	29·71	9·26	—·00	49·25	7·49	+·08	19	36·04	11·00	—·11	50·04	6·64	—·04		
	5	29·84	9·27	—·09	49·27	7·46	+·08	20	36·17	11·06	—·08	50·05	6·63	—·06		
	6	29·98	9·28	—·17	49·30	7·44	+·06	21	36·31	11·12	—·03	50·05	6·62	—·07		
	7	30·12	9·29	—·22	49·32	7·42	+·03	22	36·45	11·17	+·03	50·06	6·62	—·07		
	8	30·26	9·31	—·23	49·34	7·39	—·01	23	36·59	11·23	+·08	50·06	6·61	—·06		
	9	30·39	9·33	—·18	49·36	7·37	—·04	24	36·73	11·29	+·11	50·07	6·61	—·03		
	10	30·53	9·34	—·10	49·39	7·35	—·07	25	36·86	11·34	+·12	50·07	6·60	—·00		
	11	30·67	9·36	+·01	49·41	7·32	—·08	26	37·00	11·40	+·10	50·07	6·60	+·04		
	12	30·81	9·38	+·10	49·43	7·30	—·07	27	37·14	11·46	+·05	50·08	6·60	+·06		
	13	30·95	9·41	+·19	49·45	7·28	—·04	28	37·28	11·51	—·03	50·08	6·59	+·08		
	14	31·08	9·43	+·22	49·47	7·25	—·00	29	37·41	11·57	—·11	50·08	6·59	+·08		
	15	31·22	9·45	+·21	49·50	7·23	+·03	30	37·55	11·62	—·18	50·08	6·59	+·06		
	16	31·36	9·48	+·16	49·52	7·21	+·06	Oct. 1	37·69	11·68	—·21	50·08	6·59	+·02		
	17	31·50	9·51	+·09	49·54	7·18	+·07		2	37·83	11·73	—·20	50·07	6·59	—·02	
	18	31·63	9·54	+·01	49·56	7·16	+·07		3	37·96	11·79	—·14	50·07	6·59	—·06	

PRECESSION, NUTATION, &C., 1924. 201

Mean Noon.	LONGITUDE.			Appar- ent Obliqui- ty.	OBLIQUITY.		Mean Noon.	LONGITUDE.			Appar- ent Obliqui- ty.	OBLIQUITY.			
	Pre- cession from 1924°0	Nutation.			Nutation.			Pre- cession from 1924°0	Nutation.			Nutation.			
		ΔL	$d L$		$\Delta \omega$	$d \omega$			ΔL	$d L$		$\Delta \omega$	$d \omega$		
		—		23° 26'	—			—		23° 26'	—				
Oct.	3	37° 96	11° 79	— 14	50° 07	6° 59	— 06	Nov. 18	44° 29	13° 05	+ 11	49° 54	7° 07	— 02	
	4	38° 10	11° 84	— 04	50° 07	6° 59	— 08		19	44° 43	13° 04	+ 10	49° 52	7° 08	+ 02
	5	38° 24	11° 89	+ 07	50° 07	6° 59	— 08		20	44° 57	13° 03	+ 06	49° 51	7° 09	+ 05
	6	38° 38	11° 94	+ 16	50° 06	6° 60	— 06		21	44° 71	13° 02	+ 00	49° 50	7° 10	+ 07
	7	38° 51	12° 00	+ 22	50° 06	6° 60	— 03		22	44° 84	13° 01	— 09	49° 48	7° 11	+ 08
	8	38° 65	12° 05	+ 23	50° 05	6° 60	+ 01		23	44° 98	12° 99	— 17	49° 47	7° 12	+ 07
	9	38° 79	12° 10	+ 20	50° 05	6° 61	+ 04		24	45° 12	12° 98	— 22	49° 46	7° 14	+ 05
	10	38° 93	12° 15	+ 14	50° 04	6° 61	+ 07		25	45° 26	12° 96	— 24	49° 45	7° 15	+ 01
	11	39° 06	12° 20	+ 06	50° 03	6° 62	+ 07		26	45° 39	12° 94	— 20	49° 44	7° 16	— 03
	12	39° 20	12° 24	— 02	50° 03	6° 62	+ 07		27	45° 53	12° 92	— 12	49° 43	7° 17	— 06
	13	39° 34	12° 29	— 09	50° 02	6° 63	+ 05		28	45° 67	12° 90	— 01	49° 42	7° 17	— 08
	14	39° 48	12° 33	— 13	50° 01	6° 64	+ 02		29	45° 81	12° 88	+ 10	49° 41	7° 18	— 08
	15	39° 61	12° 38	— 14	50° 00	6° 65	— 01		30	45° 95	12° 86	+ 20	49° 40	7° 19	— 05
	16	39° 75	12° 42	— 13	49° 99	6° 65	— 03		Dec. 1	46° 08	12° 83	+ 25	49° 39	7° 20	— 02
	17	39° 89	12° 46	— 09	49° 98	6° 66	— 06		2	46° 22	12° 81	+ 25	49° 38	7° 20	+ 02
	18	40° 03	12° 50	— 04	49° 97	6° 67	— 07		3	46° 36	12° 78	+ 21	49° 37	7° 21	+ 05
	19	40° 17	12° 54	+ 01	49° 96	6° 68	— 07		4	46° 50	12° 76	+ 14	49° 37	7° 22	+ 07
	20	40° 30	12° 58	+ 06	49° 95	6° 69	— 06		5	46° 63	12° 73	+ 05	49° 36	7° 22	+ 07
21	40° 44	12° 62	+ 10	49° 94	6° 70	— 04	6	46° 77	12° 70	— 03	49° 35	7° 23	+ 06		
22	40° 58	12° 65	+ 11	49° 93	6° 71	— 01	7	46° 91	12° 67	— 09	49° 35	7° 23	+ 04		
23	40° 72	12° 69	+ 10	49° 91	6° 72	+ 02	8	47° 05	12° 64	— 12	49° 34	7° 24	+ 01		
24	40° 85	12° 72	+ 05	49° 90	6° 73	+ 06	9	47° 18	12° 61	— 12	49° 34	7° 24	— 02		
25	40° 99	12° 75	— 02	49° 89	6° 75	+ 08	10	47° 32	12° 57	— 10	49° 33	7° 24	— 04		
26	41° 13	12° 78	— 10	49° 87	6° 76	+ 08	11	47° 46	12° 54	— 06	49° 33	7° 24	— 06		
27	41° 27	12° 81	— 17	49° 86	6° 77	+ 07	12	47° 60	12° 51	— 01	49° 33	7° 24	— 07		
28	41° 40	12° 84	— 21	49° 85	6° 78	+ 04	13	47° 73	12° 47	+ 04	49° 33	7° 24	— 07		
29	41° 54	12° 87	— 21	49° 83	6° 80	— 00	14	47° 87	12° 44	+ 09	49° 33	7° 24	— 05		
30	41° 68	12° 89	— 16	49° 82	6° 81	— 04	15	48° 01	12° 40	+ 11	49° 33	7° 24	— 03		
31	41° 82	12° 91	— 07	49° 80	6° 82	— 07	16	48° 15	12° 37	+ 11	49° 33	7° 24	— 00		
Nov. 1	41° 95	12° 93	+ 04	49° 79	6° 84	— 08	17	48° 28	12° 33	+ 08	49° 33	7° 24	+ 04		
2	42° 09	12° 95	+ 14	49° 77	6° 85	— 07	18	48° 42	12° 30	+ 02	49° 33	7° 23	+ 06		
3	42° 23	12° 97	+ 22	49° 76	6° 86	— 04	19	48° 56	12° 26	— 06	49° 34	7° 23	+ 08		
4	42° 37	12° 99	+ 25	49° 75	6° 88	— 01	20	48° 70	12° 22	— 15	49° 34	7° 22	+ 08		
5	42° 50	13° 00	+ 23	49° 73	6° 89	+ 03	21	48° 84	12° 18	— 23	49° 34	7° 22	+ 06		
6	42° 64	13° 02	+ 18	49° 71	6° 90	+ 06	22	48° 97	12° 15	— 26	49° 35	7° 21	+ 02		
7	42° 78	13° 03	+ 10	49° 70	6° 92	+ 07	23	49° 11	12° 11	— 24	49° 35	7° 21	— 02		
8	42° 92	13° 04	+ 01	49° 68	6° 93	+ 07	24	49° 25	12° 07	— 17	49° 36	7° 20	— 06		
9	43° 06	13° 05	— 06	49° 67	6° 95	+ 06	25	49° 39	12° 04	+ 07	49° 37	7° 19	— 08		
10	43° 19	13° 05	— 11	49° 65	6° 96	+ 03	26	49° 52	12° 00	+ 05	49° 37	7° 18	— 08		
11	43° 33	13° 06	— 13	49° 64	6° 97	— 00	27	49° 66	11° 57	+ 15	49° 38	7° 17	— 06		
12	43° 47	13° 06	— 13	49° 62	6° 99	— 02	28	49° 80	11° 53	+ 22	49° 39	7° 16	— 03		
13	43° 61	13° 06	— 10	49° 61	7° 00	— 05	29	49° 94	11° 49	+ 25	49° 40	7° 15	+ 01		
14	43° 74	13° 06	— 06	49° 59	7° 01	— 07	30	50° 07	11° 46	+ 23	49° 41	7° 14	+ 04		
15	43° 88	13° 06	— 01	49° 58	7° 03	— 07	31	50° 21	11° 42	+ 17	49° 42	7° 12	+ 07		
16	44° 02	13° 06	+ 05	49° 57	7° 04	— 06	32	50° 35	11° 39	+ 09	49° 44	7° 11	+ 08		
17	44° 16	13° 05	+ 09	49° 55	7° 05	— 04									
18	44° 29	13° 05	+ 11	49° 54	7° 07	— 02									

202 MEAN PLACES OF STARS, 1924.

FOR JANUARY 1^d.126

Star's Name.	Mag	Spect.	Right Ascension.	Annual Precession.	Annual Proper Motion.	Declination.	Annual Precession.	Annual Proper Motion.
			^h ^m ^s	^s	^s			
α Andromedæ	2.2	A o p	0 4 27.321	+ 3.0870	+ .0107	N. 28° 40' 15".14	+ 20".041	- ".163
β Cassiopeiæ	2.4	F 5	0 5 6.744	3.1219	+ .0681	N. 58 43 50.30	20.039	- .180
γ Pegasi	2.9	B 2	0 9 19.203	+ 3.0871	+ .0003	N. 14 45 39.99	20.028	- .010
δ Octantis	7.2	A o	0 12 16.875	- 0.3033	+ .0057	S. 88 47 7.76	20.016	+ .006
ϵ Ceti	3.8	K o	0 15 33.356	+ 3.0581	- .0013	S. 9 14 42.38	19.999	- .030
ζ Tucanæ	4.3	F 8	0 16 7.491	+ 2.8684	+ .2734	S. 65 19 15.77	+ 19.995	+ 1.172
δ Piscium	5.6	K o	0 16 41.164	3.0861	+ .0003	N. 7 46 5.93	19.992	+ .016
44 Piscium	6.0	G 5	0 21 30.358	3.0761	- .0014	N. 1 31 7.73	19.956	- .023
β Hydri	2.9	G o	0 21 46.968	2.4920	+ .6950	S. 77 40 56.17	19.954	+ .319
α Phœnicis	2.4	K o	0 22 31.915	2.9517	+ .0187	S. 42 43 7.38	19.948	- .403
12 Ceti	6.0	K 5	0 26 9.631	+ 3.0612	+ .0011	S. 4 22 37.24	+ 19.914	.000
ϵ Andromedæ	4.5	G 5	0 34 32.093	3.1835	- .0173	N. 28 53 57.46	19.818	- .251
δ Andromedæ	3.5	K o	0 35 15.572	3.1932	+ .0110	N. 30 26 42.56	19.808	- .097
α Cassiopeiæ	var.	K o	0 36 11.003	3.3857	+ .0063	N. 56 7 14.77	19.796	- .032
β Ceti	2.2	K o	0 39 46.529	2.9960	+ .0160	S. 18 24 12.33	19.744	+ .041
δ Piscium	4.6	K 5	0 44 44.227	+ 3.1054	+ .0052	N. 7 10 18.09	+ 19.664	- .046
20 Ceti	4.9	K o	0 49 7.326	3.0651	- .0005	S. 1 33 23.36	19.586	- .003
γ Cassiopeiæ	2.3	B o p	0 52 6.445	3.6010	+ .0036	N. 60 18 19.93	19.529	- .005
μ Andromedæ	3.9	A 2	0 52 31.720	3.3107	+ .0132	N. 38 5 14.68	19.521	+ .030
α Sculptoris	4.4	B 5	0 54 56.599	2.8913	- .0018	S. 29 46 5.46	19.472	- .013
ϵ Piscium	4.5	K o	0 58 59.812	+ 3.1174	- .0054	N. 7 28 52.64	+ 19.384	+ .026
72 Piscium	5.7	F 2	1 1 4.442	3.1642	- .0001	N. 14 32 15.66	19.336	+ .054
β Phœnicis	3.4	K o	1 2 41.558	2.6839	- .0057	S. 47 7 33.10	19.299	- .024
β Andromedæ	2.4	M a	1 5 28.229	3.3386	+ .0148	N. 35 13 4.70	19.232	- .117
ζ^1 Piscium	5.6	A 5	1 9 45.524	3.1232	+ .0096	N. 7 10 25.90	19.123	- .052
θ Ceti	3.8	K o	1 20 13.429	+ 3.0037	- .0057	S. 8 34 30.34	+ 18.829	- .215
δ Cassiopeiæ	2.8	A 5	1 20 49.779	3.8672	+ .0407	N. 59 50 27.74	18.811	- .037
γ Phœnicis	3.4	K 5	1 25 3.916	2.6095	- .0038	S. 43 42 26.49	18.680	- .218
η Piscium	3.7	G 5	1 27 24.782	3.2057	+ .0015	N. 14 57 16.32	18.605	- .003
α Ursæ Minoris	2.1	F 8	1 33 42.610	30.6929	+ .1519	N. 88 53 52.74	18.392	+ .001
α Eridani	0.6	B 5	1 34 53.101	+ 2.2249	+ .0103	S. 57 37 21.46	+ 18.351	- .041
ν Piscium	4.7	K o	1 37 28.445	3.1220	- .0017	N. 5 6 12.52	18.259	+ .002
δ Piscium	4.5	K o	1 41 22.676	3.1611	+ .0049	N. 8 46 32.63	18.115	+ .045
ζ Ceti	3.9	K o	1 47 42.505	2.9583	+ .0020	S. 10 42 35.46	17.872	- .027
ϵ Cassiopeiæ	3.4	B 3	1 48 54.517	4.2882	+ .0053	N. 63 17 47.94	17.824	- .015
β Arietis	2.7	A 5	1 50 26.222	+ 3.3036	+ .0064	N. 20 26 13.66	+ 17.762	- .111
α Hydri	3.0	F o	1 56 22.016	1.8540	+ .0276	S. 61 56 21.55	17.516	+ .026
ν Ceti	4.2	K 5	1 56 25.398	2.8174	+ .0082	S. 21 26 43.54	17.514	- .009
γ Andromedæ	2.3	K o	1 59 13.577	3.6702	+ .0046	N. 41 57 56.92	17.393	- .051
α Arietis	2.2	K 2	2 2 53.069	3.3640	+ .0139	N. 23 6 13.67	17.232	- .144
β Trianguli	3.1	A 5	2 5 0.908	+ 3.5515	+ .0127	N. 34 37 42.69	+ 17.135	- .044
ζ^1 Ceti	4.5	G 5	2 8 58.153	3.1793	- .0013	N. 8 29 26.72	16.953	- .016
67 Ceti	5.7	G 5	2 13 11.470	2.9857	+ .0054	S. 6 46 18.47	16.754	- .110
ϕ Eridani	3.8	B 8	2 13 47.614	+ 2.1346	+ .0081	S. 51 51 49.14	+ 16.725	- .036

PROPER NAMES.— γ Pegasi - *Algenib*. α Ursæ Minoris - *Polaris*. α Eridani - *Achernar*.VARIABLE STARS.— α Cassiopeiæ. The limits of magnitude are 2.2 and 2.8. Period irregular.

MEAN PLACES OF STARS, 1924. 203

FOR JANUARY 1^d 126

Star's Name.	Mag	Spect.	Right Ascension.	Annual Precession.	Annual Proper Motion.	Declination.	Annual Precession.	Annual Proper Motion.
			h m s	s	s	N. 19 33 1°04	+16.720	— .002
θ Arietis - -	5.7	A o	2 13 53.642	+ 3.3345	— .0010	N. 19 33 1°04	+16.720	— .002
o Ceti - - -	var.	M d	2 15 30.357	3.0295	+ .0002	S. 3 19 18.87	16.642	— .229
κ Fornacis - -	5.4	F 5	2 19 3.892	2.7310	+ .0142	S. 24 9 40.07	16.467	— .063
δ Hydri - - -	4.3	A 2	2 20 23.437	1.0708	— .0097	S. 69 0 17.52	16.399	+ .020
ξ ² Ceti - - -	4.3	A o	2 24 6.927	+ 3.1850	+ .0025	N. 8 7 12.69	16.211	— .007
γ B Octantis -	7.8	F o	2 31 50.086	— 8.8516	— .0203	S. 86 3 24.40	+15.804	+ .006
ν Ceti - - -	5.0	G 5	2 31 52.986	+ 3.1486	— .0025	N. 5 15 44.91	15.800	— .018
δ Ceti - - -	4.0	B 2	2 35 35.122	3.0728	+ .0011	N. 0 0 5.55	15.601	+ .004
γ Ceti - - -	3.6	A o	2 39 21.613	3.1164	— .0098	N. 2 54 58.65	15.391	— .148
π Ceti - - -	4.4	B 5	2 40 30.246	2.8552	— .0012	S. 14 10 47.24	15.326	— .011
β Fornacis -	4.5	K o	2 45 54.601	+ 2.5041	+ .0080	S. 32 43 28.28	+15.017	+ .156
σ Arietis - -	5.5	B 5	2 47 17.590	+ 3.3078	+ .0016	N. 14 46 10.71	14.936	— .034
10 B Octantis	8.4	G 5	2 50 35.267	— 30.9766	— .0618	S. 88 28 36.99	14.744	— .025
ε Arietis (mean)	4.6	A 2	2 54 51.720	+ 3.4280	— .0009	N. 21 2 14.10	14.486	— .010
θ Eridani - -	3.1	A 2	2 55 22.901	2.2792	— .0025	S. 40 36 30.92	14.457	+ .024
α Ceti - - -	2.8	M a	2 58 18.259	+ 3.1350	— .0009	N. 3 47 32.78	+14.278	— .078
γ Persei - - -	3.1	F 5 p	2 59 16.855	4.3324	+ .0010	N. 53 12 36.35	14.218	— .004
μ Horologii -	5.2	F o	3 1 49.036	1.4210	— .0123	S. 60 1 54.79	14.061	— .054
β Persei - - -	var.	B 8	3 3 12.992	3.8958	+ .0008	N. 40 39 50.32	13.974	— .002
δ Arietis - -	4.5	K o	3 7 16.778	3.4167	+ .0110	N. 19 26 25.30	13.716	+ .001
τ ¹ Arietis - -	5.2	B 3	3 16 50.151	+ 3.4587	+ .0023	N. 20 52 26.52	+13.093	— .033
α Persei - - -	1.9	F 5	3 18 53.237	4.2703	+ .0030	N. 49 35 31.08	12.959	— .028
o Tauri - - -	3.8	G 5	3 20 43.246	3.2310	— .0046	N. 8 45 44.76	12.837	— .074
f Tauri - - -	4.3	K o	3 26 40.472	3.3086	+ .0016	N. 12 40 38.24	12.432	+ .002
ε Eridani - -	3.8	K o p	3 29 20.920	2.8917	— .0660	S. 9 42 52.21	12.248	+ .027
45 G Horologii	5.6	K o	3 30 18.520	+ 1.7791	+ .0048	S. 50 38 9.47	+12.181	+ .080
τ ⁵ Eridani - -	4.3	B 8	3 30 25.741	2.6463	+ .0023	S. 21 53 13.43	12.171	— .039
11 Tauri - - -	6.2	A o	3 36 13.730	3.5793	+ .0014	N. 25 5 5.67	11.763	— .008
δ Persei - - -	3.1	B 5	3 37 30.340	4.2602	+ .0035	N. 47 32 45.27	11.675	— .036
δ Eridani - -	3.7	K o	3 39 36.373	2.8796	— .0064	S. 10 1 11.02	11.525	+ .747
17 Tauri - - -	3.8	B 5	3 40 21.515	+ 3.5578	+ .0017	N. 23 52 31.96	+11.472	— .044
η Tauri - - -	3.0	B 5	3 42 57.780	+ 3.5616	+ .0016	N. 23 52 16.46	11.284	— .050
γ Hydri - - -	3.2	M a	3 48 23.798	— 0.9654	+ .0097	S. 74 28 19.93	10.888	+ .117
ζ Persei - - -	2.9	B 1	3 49 21.003	+ 3.7665	+ .0010	N. 31 39 32.97	10.818	— .014
ε Persei - - -	3.0	B 1	3 52 44.931	4.0186	+ .0031	N. 39 47 30.12	10.566	— .027
γ Eridani - -	3.2	K 5	3 54 28.980	+ 2.7941	+ .0047	S. 13 43 25.55	+10.438	— .111
A Tauri - - -	4.5	K o	4 0 11.947	3.5378	+ .0069	N. 21 52 31.71	10.005	— .058
43 Tauri - - -	5.7	G 5	4 44 4.148	3.4854	+ .0079	N. 19 24 33.45	9.659	— .044
o ¹ Eridani - -	4.1	F 5	4 8 9.282	2.9271	+ .0007	S. 7 2 4.77	9.398	+ .086
α Horologii -	3.8	K o	4 11 28.985	1.9837	+ .0040	S. 42 28 53.27	9.141	— .231
α Reticuli - -	3.4	G 5	4 13 26.434	+ 0.7621	+ .0048	S. 62 39 49.75	+ 8.988	+ .044
v ⁴ Eridani - -	3.6	B 9	4 15 0.937	2.2649	+ .0025	S. 33 58 58.46	8.864	— .000
γ Tauri - - -	3.9	K o	4 15 27.946	3.4043	+ .0082	N. 15 26 42.78	8.829	— .029
ε Tauri - - -	3.6	K o	4 24 10.595	3.4936	+ .0082	N. 19 0 47.27	8.138	— .034
α Tauri - - -	1.1	K 5	4 31 33.442	+ 3.4362	+ .0047	N. 16 21 27.91	+ 7.545	— .189

PROPER NAMES.—o Ceti - *Mira* β Persei - *Algol*. α Tauri - *Aldebaran*.

VARIABLE STARS.—o Ceti. The limits of magnitude are 1.7-9.6. Period 331^d.6.

β Persei. The limits of magnitude are 2.1 and 3.2. Period 2^d 21^h.

NOTE.—ε Eridani. The apparent places are affected with a parallax of 0".32.

204 MEAN PLACES OF STARS, 1924.

FOR JANUARY 1d.126

Star's Name.	Mag.	Spect.	Right Ascension.	Annual Precession.	Annual Proper Motion.	Declination.	Annual Precession.	Annual Proper Motion.
			^h ^m ^s	^s	^s	[°] ['] ["]		
α Doradus -	3.5	A o p	4 32 21.175	+ 1.2888	+ .0067	S. 55 12 6.54	+ 7.480	- .011
53 Eridani -	4.0	K o	4 34 41.867	2.7520	- .0061	S. 14 27 5.37	7.290	- .154
τ Tauri -	4.3	B 5	4 37 40.887	3.5990	+ .0007	N. 22 48 44.65	7.046	- .020
μ Eridani -	4.2	B 5	4 41 42.082	2.9981	+ .0013	S. 3 23 34.43	6.716	- .012
π^3 Orionis -	3.3	F 8	4 45 42.770	3.2246	+ .0312	N. 6 49 47.71	6.382	+ .023
ι Aurigæ -	2.9	K 2	4 52 2.488	+ 3.9042	+ .0009	N. 33 2 49.88	+ 5.857	- .021
ϵ Aurigæ -	var.	F 5 p	4 56 30.736	4.3017	+ .0012	N. 43 42 44.54	5.482	- .013
η Aurigæ -	3.3	B 3	5 1 10.961	4.2017	+ .0039	N. 41 7 59.58	5.088	- .072
ϵ Leporis -	3.3	K 5	5 2 14.582	2.5375	+ .0012	S. 22 28 19.60	4.999	- .064
β Eridani -	2.9	A 2	5 4 6.793	2.9552	- .0056	S. 5 11 0.56	4.840	- .074
μ Leporis -	3.3	A o p	5 9 31.020	+ 2.6916	+ .0027	S. 16 17 39.91	+ 4.378	- .028
β Orionis -	0.3	B 8 p	5 10 53.069	2.8826	.0000	S. 8 17 17.90	4.263	.000
α Aurigæ -	0.2	G o	5 11 4.313	4.4215	+ .0086	N. 45 55 20.55	4.247	- .429
σ Orionis -	4.6	B 3	5 17 52.887	3.0624	- .0001	S. 0 27 22.51	3.661	+ .005
η Orionis (mean)	3.4	B 1	5 20 39.323	3.0161	+ .0005	S. 2 27 57.29	3.424	+ .001
γ Orionis -	1.7	B 2	5 21 3.231	+ 3.2177	- .0004	N. 6 16 55.29	+ 3.390	- .017
β Tauri -	1.8	B 8	5 21 29.177	3.7894	+ .0025	N. 28 32 40.88	3.353	- .177
β Leporis -	3.0	G o	5 24 59.338	2.5706	+ .0004	S. 20 49 8.94	3.050	- .093
20 G Pictoris -	5.5	G 5	5 28 4.006	1.6469	- .0005	S. 47 7 57.10	2.783	- .188
δ Orionis -	2.5	B o	5 28 7.388	3.0646	.0000	S. 0 21 15.14	2.779	- .002
α Leporis -	2.7	F o	5 29 22.677	+ 2.6456	+ .0003	S. 17 52 32.47	+ 2.670	.000
ι Orionis -	2.9	O e 5	5 31 42.900	2.9344	+ .0001	S. 5 57 31.31	2.467	- .002
ϵ Orionis -	1.7	B o	5 32 21.382	3.0438	.0000	S. 1 14 57.21	2.412	+ .001
β Doradus -	3.8	F 5	5 32 57.941	0.5192	+ .0002	S. 62 32 23.15	2.359	- .026
ζ Tauri -	3.0	B 3	5 33 6.117	3.5848	+ .0006	N. 21 5 50.73	2.347	- .032
α Columbae -	2.7	B 5 p	5 36 53.818	+ 2.1721	+ .0006	S. 34 6 50.06	+ 2.017	- .038
ζ Orionis -	2.0	B o	5 36 55.417	3.0268	+ .0005	S. 1 58 54.36	2.013	- .014
130 Tauri -	5.5	F o	5 43 0.300	3.4981	+ .0004	N. 17 42 7.11	1.485	- .006
κ Orionis -	2.2	B o	5 44 9.101	+ 2.8450	+ .0001	S. 9 41 43.88	1.385	- .003
31 G Mensae -	6.2	A o	5 44 53.032	- 11.6560	- .0118	S. 8 49 37.44	1.321	+ .087
β Columbae -	3.2	K o	5 48 16.755	+ 2.1104	+ .0034	S. 35 47 45.76	+ 1.025	+ .404
α Orionis -	var.	M a	5 51 3.419	3.2461	+ .0020	N. 7 23 38.98	0.782	+ .009
β Aurigæ -	2.1	A o p	5 53 57.278	4.4059	- .0038	N. 44 56 29.03	0.529	- .006
θ Aurigæ -	2.7	A o p	5 54 32.327	4.0872	+ .0047	N. 37 12 31.41	0.478	- .091
1 Geminorum -	4.3	G 5	5 59 30.038	+ 3.6474	+ .0002	N. 23 16 7.51	0.041	- .109
12 B Octantis -	6.8	K o	5 59 51.621	- 15.7220	- .0265	S. 85 55 59.07	+ 0.012	+ .005
ν Orionis -	4.4	B 2	6 3 13.996	+ 3.4253	+ .0012	N. 14 46 43.76	- 0.283	- .025
η Geminorum -	var.	M a	6 10 17.457	3.6266	- .0039	N. 22 31 48.63	0.900	- .016
ζ Canis Maj. -	3.1	B 3	6 17 23.643	2.3026	- .0006	S. 30 1 44.75	1.520	- .023
μ Geminorum -	3.2	M a	6 18 21.801	3.6260	+ .0046	N. 22 33 14.40	1.605	- .114
β Canis Maj. -	2.0	B 1	6 19 21.146	+ 2.6423	- .0006	S. 17 55 1.39	- 1.691	+ .004
α Argus -	- 0.9	F o	6 22 15.889	1.3298	+ .0022	S. 52 39 13.55	1.944	+ .009
ν Geminorum -	4.1	B 5	6 24 27.045	3.5633	- .0005	N. 20 15 41.83	2.137	- .016
γ Geminorum -	1.9	A o	6 33 19.332	+ 3.4636	+ .0033	N. 16 27 55.52	- 2.904	- .048

PROPER NAMES.— β Orionis - *Rigel*. α Aurigæ - *Capella*. γ Orionis - *Bellatrix*. α Orionis - *Betelgeuse*. α Argus - *Canopus*.VARIABLE STARS.— ϵ Aurigæ - The limits of magnitude are 3.4 and 4.1. α Orionis - The limits of magnitude are 0.3 and 1.1. Period irregular. η Geminorum - The limits of magnitude are 3.2 and 4.2. Period 231.4 days.

MEAN PLACES OF STARS, 1924. 205

FOR JANUARY 1d.125

Star's Name.	Mag.	Spect.	Right Ascension.	Annual Precession.	Annual Proper Motion.	Declination.	Annual Precession.	Annual Proper Motion.
			h m s	s	s	° ' " "		
ν Argûs - -	3.2	B 8	6 35 26.240	+ 1.8360	+ .0008	S. 43 7 43.25	- 3.087	- .019
ϵ Geminorum -	3.2	G 5	6 39 15.438	3.6926	- .0001	N. 25 12 28.04	3.417	- .018
ξ Geminorum -	3.4	F 5	6 41 1.474	3.3759	- .0077	N. 12 58 43.82	3.569	- .193
α Canis Maj. -	-1.6	A 0	6 41 47.937	2.6808	- .0374	S. 16 36 39.19	3.636	- 1.206
α Pictoris - -	3.3	A 5	6 47 24.797	0.6276	- .0104	S. 61 51 35.04	4.117	+ .238
τ Argûs - -	2.8	K 0	6 48 3.001	+ 1.4859	+ .0029	S. 50 31 25.42	- 4.172	- .096
θ Canis Maj. -	4.3	K 2	6 50 39.563	2.7971	- .0091	S. 11 56 31.96	4.395	- .007
ϵ Canis Maj. -	1.6	B 1	6 55 38.319	2.3576	- .0001	S. 28 52 3.73	4.819	+ .003
22 Canis Maj. -	3.7	K 5	6 58 41.481	2.3905	- .0006	S. 27 49 30.03	5.079	+ .002
ζ Geminorum -	var.	G 0	6 59 36.170	3.5604	- .0002	N. 20 40 59.04	5.155	- .007
α^2 Canis Maj. -	3.1	B 5 p	6 59 51.051	+ 2.5055	- .0002	S. 23 43 16.84	- 5.175	.000
γ Canis Maj. -	4.1	B 5	7 0 19.223	2.7145	+ .0003	S. 15 31 11.76	5.215	- .010
δ Canis Maj. -	2.0	F 8 p	7 5 17.998	2.4397	- .0015	S. 26 16 17.71	5.634	+ .003
51 H Cephei -	5.3	M a	7 5 27.526	29.0206	- .0582	N. 87 10 15.95	5.648	- .034
51 Geminorum	5.3	M b	7 9 0.552	3.4456	+ .0019	N. 16 17 21.19	5.947	- .042
π Argûs - -	2.7	K 5	7 14 27.513	+ 2.1198	- .0008	S. 36 57 37.73	- 6.398	- .010
δ Geminorum -	3.5	F 0	7 15 35.188	+ 3.5868	- .0010	N. 22 7 24.93	6.491	- .015
δ Volantis - -	4.0	F 5	7 16 52.813	- 0.0221	+ .0004	S. 67 49 5.57	6.599	- .006
η Canis Maj. -	2.4	B 5 p	7 21 5.321	+ 2.3735	- .0005	S. 29 9 13.89	6.945	+ .013
β Canis Min. -	3.1	B 8	7 23 1.836	3.2582	- .0032	N. 8 26 36.98	7.104	- .047
σ Argûs - -	3.3	K 5	7 26 49.113	+ 1.9091	- .0072	S. 43 8 48.65	- 7.414	+ .180
α Geminorum -	2.0	A 0	7 29 45.229	3.8463	- .0144	N. 32 3 25.06	7.651	- .082
Q Carinæ - -	4.9	K 5	7 33 46.600	+ 1.4829	- .0045	S. 52 21 50.58	7.977	- .052
Λ Octantis -	7.8	A 0	7 34 31.617	-48.1949	- .0398	S. 88 37 55.40	8.035	+ .009
α Canis Min. -	0.5	F 5	7 35 19.468	+ 3.1888	- .0472	N. 5 25 14.52	8.099	- 1.036
26 Monocerotis	4.1	K 0	7 37 36.958	+ 2.8719	- .0057	S. 9 22 22.26	- 8.282	- .021
β Geminorum -	1.2	K 0	7 40 40.094	3.7216	- .0470	N. 28 12 39.70	8.524	- .054
ξ Argûs - -	3.5	G 0	7 46 5.875	2.5237	- .0004	S. 24 40 5.15	8.953	.000
χ Geminorum -	5.0	K 0	7 58 51.265	3.6902	- .0012	N. 28 0 30.81	9.935	- .053
ζ Argûs - -	2.3	O d	8 0 54.720	2.1112	- .0044	S. 39 47 18.78	10.091	- .005
ρ Argûs - -	2.9	F 5	8 4 18.419	+ 2.5612	- .0065	S. 24 5 3.18	- 10.347	- .052
γ Argûs - -	2.2	O a p	8 7 11.495	1.8501	- .0003	S. 47 6 43.73	10.562	- .011
20 Puppis - -	5.1	G 5	8 9 50.377	2.7588	- .0009	S. 15 33 29.80	10.758	+ .001
β Cancri - -	3.8	K 2	8 12 23.702	3.2585	- .0035	N. 9 25 15.04	10.946	- .052
δ^1 Cancri - -	5.9	F 0	8 19 0.885	3.4418	- .0038	N. 18 34 38.20	11.429	- .031
ϵ Argûs - -	1.7	K o p	8 20 57.347	+ 1.2372	- .0042	S. 59 15 52.43	- 11.566	+ .008
30 Monocerotis	4.0	A 0	8 21 51.864	3.0032	- .0039	S. 3 39 26.89	11.631	- .019
4 B Ursæ Min.	7.0	A 0	8 22 39.807	57.6880	- .0377	N. 88 51 40.31	11.687	+ .018
α Ursæ Maj. -	3.5	G 0	8 23 57.986	5.0213	- .0160	N. 60 58 25.68	11.780	- .112
η Cancri - -	5.5	K 0	8 28 19.024	3.4757	- .0025	N. 20 42 1.24	12.085	- .055
γ Cancri - -	4.7	A 0	8 38 53.487	+ 3.4826	- .0071	N. 21 44 34.29	- 12.812	- .043
α Mali - -	3.7	B 2	8 40 32.262	2.4116	- .0003	S. 32 54 41.99	12.921	+ .011
δ Argûs - -	2.0	A 0	8 42 36.063	+ 1.6550	- .0035	S. 54 25 46.53	- 13.058	- .100

PROPER NAMES.— α Canis Majoris - *Sirius*.

α Canis Minoris - *Procyon*.

α Geminorum - *Castor*.

β Geminorum - *Pollux*.

VARIABLE STARS.— ζ Geminorum. The limits of magnitude are 3.7 and 4.3. Period 10.2 days.

NOTES.— α Canis Majoris. The mean place is that of the centre of the orbit: the apparent places, those of the brighter star. The apparent places are affected with a parallax of $0''.38$.

α Geminorum. Both mean and apparent places refer to the brighter star.

α Canis Minoris. The mean place is that of the centre of the orbit: the apparent places, those of the brighter star. The apparent places are affected with a parallax of $0''.33$.

206 MEAN PLACES OF STARS, 1924.

FOR JANUARY 1^d. 126

Star's Name.	Mag	Spect.	Right Ascension.	Annual Precession.	Annual Proper Motion.	Declination.	Annual Precession.	Annual Proper Motion.
			h m s	s	s			
ε Hydræ - -	3.5	F 8	8 42 45.190	+ 3.1918	-.0126	N. 6 41 54.96	-13.068	- .050
ζ Hydræ - -	3.3	K 0	8 51 22.721	3.1798	-.0060	N. 6 14 8.52	13.631	+ .007
ι Ursæ Maj. -	3.1	A 5	8 54 0.800	4.1622	-.0435	N. 48 20 28.01	13.799	- .248
α Cancri - -	4.3	A 3	8 54 19.981	3.2813	+ .0024	N. 12 9 9.99	13.819	- .042
κ Cancri - -	5.1	B 8	9 3 37.989	3.2531	-.0013	N. 10 58 29.70	14.398	- .013
ξ Cancri - -	5.2	G 5	9 4 59.630	+ 3.4527	+ .0011	N. 22 21 13.77	-14.481	+ .002
λ Argûs - -	2.2	K 5	9 5 11.995	2.2081	-.0015	S. 43 7 31.23	14.491	- .007
β Argûs - -	1.8	A 0	9 12 22.340	0.6977	- .0310	S. 69 24 14.59	14.918	+ .094
83 Cancri - -	6.6	F 5	9 14 44.601	3.3600	-.0076	N. 18 1 42.06	15.056	- .136
ι Argûs - -	2.3	F 0	9 15 3.311	1.6094	-.0035	S. 58 57 21.32	15.074	+ .002
40 Lynceis -	3.3	K 5	9 16 25.839	+ 3.6789	-.0178	N. 34 42 53.50	-15.152	+ .012
h Mali - -	4.9	M a	9 18 7.444	2.6565	-.0048	S. 25 38 30.32	15.250	- .032
κ Argûs - -	2.6	B 3	9 19 45.504	1.8587	-.0033	S. 54 41 9.36	15.342	- .018
α Hydræ - -	2.2	K 2	9 23 51.191	2.9495	-.0010	S. 8 19 42.13	15.570	+ .033
ψ Argûs - -	3.6	F 5	9 27 42.200	2.3780	-.0181	S. 40 8 1.62	15.779	+ .038
θ Ursæ Maj. -	3.3	F 8	9 27 47.106	+ 4.1280	-.1026	N. 52 1 28.90	-15.784	- .542
ξ Leonis - -	5.1	G 5	9 27 51.102	3.2423	.0063	N. 11 38 13.86	15.788	- .084
N Velorum -	3.0	K 5	9 28 54.757	1.8268	- .0036	S. 56 41 54.77	15.845	+ .001
κ Hydræ - -	5.0	B 3	9 36 39.766	2.8779	-.0018	S. 13 59 12.16	16.251	- .011
o Leonis - -	3.8	F 5 p	9 37 5.803	3.2137	-.0094	N. 10 14 19.77	16.273	- .037
ε Leonis - -	3.1	G o p	9 41 32.463	+ 3.4128	-.0034	N. 24 7 29.46	-16.496	- .022
μ Leonis - -	4.1	K 0	9 48 26.718	3.4325	-.0162	N. 26 21 56.32	16.832	- .056
π Leonis - -	4.9	M a	9 56 11.922	3.1744	-.0029	N. 8 24 34.23	17.190	- .027
α Leonis - -	1.3	B 8	10 4 19.604	3.2142	-.0169	N. 12 20 21.22	17.545	- .002
q Velorum -	4.1	A 2	10 11 32.481	2.5293	-.0153	S. 41 44 41.91	17.841	+ .032
22 Sextantis -	5.4	F 0	10 13 51.236	+ 2.9922	-.0106	S. 7 41 19.92	-17.934	+ .004
q Carinæ - -	3.4	K 5	10 14 32.533	2.0044	-.0045	S. 60 57 7.70	17.961	+ .001
γ Leonis (1st *)	2.6	K 0	10 15 47.114	3.2890	+ .0212	N. 20 13 35.64	18.009	- .152
μ Ursæ Maj. -	3.2	K 5	10 17 48.534	3.5895	-.0068	N. 41 52 56.39	18.085	+ .027
μ Hydræ - -	4.1	K 5	10 22 24.842	2.9098	-.0089	S. 16 26 51.96	18.255	- .079
α Antliæ - -	4.4	K 5	10 23 40.315	+ 2.7493	-.0060	S. 30 40 50.77	-18.300	- .023
ρ Leonis - -	3.9	B o p	10 28 48.668	+ 3.1613	-.0006	N. 9 41 53.39	18.479	- .005
10 G Octantis -	6.7	A 0	10 35 38.499	- 3.3186	-.0097	S. 85 41 51.23	18.702	- .023
34 Sextantis -	6.6	F 5	10 38 42.090	+ 3.1050	-.0059	N. 3 58 50.66	18.798	+ .028
θ Argûs - -	3.0	B 0	10 40 14.423	2.1385	-.0043	S. 63 59 47.77	18.843	- .027
η Argûs - -	var.	Pec	10 42 6.489	+ 2.3231	-.0002	S. 59 17 4.90	-18.899	- .009
μ Argûs - -	2.8	G 5	10 43 29.781	2.5687	+ .0066	S. 49 1 7.04	18.938	- .081
l Leonis - -	5.3	A 0	10 45 15.878	3.1556	+ .0001	N. 10 56 51.55	18.989	- .033
ν Hydræ - -	3.3	K 0	10 45 52.436	2.9526	+ .0066	S. 15 47 44.26	19.006	+ .195
ι Antliæ - -	4.7	K 0	10 53 10.363	2.7862	+ .0062	S. 36 43 44.21	19.199	- .137
d Leonis - -	5.1	K 0	10 56 38.173	+ 3.0985	+ .0004	N. 4 1 32.97	-19.284	- .022
β Ursæ Maj. -	2.4	A 0	10 57 16.056	3.6246	+ .0105	N. 56 47 24.48	19.299	+ .026
α Ursæ Maj. -	2.0	K 0	10 59 3.202	+ 3.7378	-.0164	N. 62 9 41.86	19.340	- .071
η Octantis -	6.3	A 0	10 59 52.649	- 0.3301	-.0578	S. 84 11 6.16	19.359	- .005
χ Leonis - -	4.7	F 0	11 1 5.876	+ 3.1190	-.0234	N. 7 44 50.42	-19.387	- .040

PROPER NAMES.—α Leonis - *Regulus*.α Ursæ Majoris - *Dubhe*.

VARIABLE STARS.—η Argûs. The limits of magnitude are > 1, and 7.4. Period irregular.

MEAN PLACES OF STARS, 1924. 207

FOR JANUARY 1^d. 126

Star's Name.	Mag	Spect.	Right Ascension.	Annual Precession.	Annual Proper Motion.	Declination.	Annual Precession.	Annual Proper Motion.
			h m s	s	s			
ψ Ursæ Maj. -	3.2	K o	11 5 23.920	+ 3.3872	- .0053	N. 44° 54' 40".25	- 19".478	- ".033
β Crateris -	4.5	A 2	11 7 55.063	2.9486	.0000	S. 22 24 38.83	19.530	- .106
δ Leonis -	2.6	A 2	11 10 4.185	3.1833	+ .0108	N. 20 56 25.05	19.571	- .141
θ Leonis -	3.4	A o	11 10 15.210	3.1545	- .0049	N. 15 50 42.73	19.574	- .085
δ Crateris -	3.8	K o	11 15 32.360	3.0068	- .0088	S. 14 22 1.49	19.669	+ .195
τ Leonis -	5.2	K o	11 24 1.755	+ 3.0848	+ .0008	N. 3 16 29.98	- 19.798	- .017
λ Draconis -	4.1	M a	11 26 54.763	3.5939	- .0072	N. 69 45 2.57	19.836	- .021
ξ Hydræ -	3.7	G 5	11 29 15.634	2.9635	- .0158	S. 31 26 13.44	19.864	- .055
λ Centauri -	3.3	B 9	11 32 15.911	2.7616	- .0073	S. 62 35 57.34	19.898	- .027
ν Leonis -	4.5	K o	11 33 3.443	3.0716	.0000	S. 0 24 14.40	19.906	+ .039
ν Virginis -	4.2	M a	11 41 57.225	+ 3.0856	- .0015	N. 6 57 19.35	- 19.983	- .186
β Leonis -	2.2	A 2	11 45 11.087	3.0959	- .0341	N. 14 59 49.08	20.003	- .118
β Virginis -	3.8	F 8	11 46 44.187	3.0758	+ .0494	N. 2 11 35.16	20.011	- .275
B Centauri -	4.7	K o	11 47 20.228	2.9996	- .0111	S. 44 45 2.91	20.014	- .046
γ Ursæ Maj. -	2.5	A o	11 49 50.527	3.1546	+ .0115	N. 54 7 2.33	20.025	+ .004
π Virginis -	4.6	A 3	11 56 58.699	+ 3.0750	- .0009	N. 7 2 17.20	- 20.043	- .032
ο Virginis -	4.2	G 5	12 1 20.306	3.0716	- .0148	N. 9 9 17.86	20.044	+ .032
δ Centauri -	2.9	B 3 p	12 4 24.668	3.1037	- .0050	S. 50 17 57.69	20.041	- .030
ε Corvi -	3.2	K o	12 6 12.780	3.0876	- .0051	S. 22 11 49.84	20.038	+ .003
δ Crucis -	3.1	B 3	12 11 5.962	3.1776	- .0050	S. 58 19 34.82	20.021	- .027
δ Ursæ Maj. -	3.4	A 2	12 11 40.495	+ 2.9662	+ .0149	N. 57 27 17.40	- 20.018	+ .005
γ Corvi -	2.8	B 8	12 11 53.695	3.0941	- .0112	S. 17 7 12.19	20.018	+ .017
β Chamæleontis -	4.4	B 5	12 13 51.032	3.4837	- .0188	S. 78 53 24.88	20.008	+ .017
6 B Ursæ Min. -	6.3	F o	12 14 31.221	0.4934	- .0704	N. 88 7 16.46	20.005	+ .058
η Virginis -	4.0	A o	12 16 1.054	3.0732	- .0036	S. 0 14 40.48	19.996	- .027
α Crucis -	1.6	B 1	12 22 21.393	+ 3.3247	- .0064	S. 62 40 41.36	- 19.950	- .039
δ Corvi -	3.1	A o	12 25 55.778	3.1163	- .0140	S. 16 5 32.95	19.916	- .149
γ Crucis -	1.6	M b	12 26 56.349	3.3113	+ .0026	S. 56 41 16.38	19.907	- .278
β Corvi -	2.8	G 5	12 30 23.430	3.1477	- .0008	S. 22 58 35.93	19.869	- .061
α Muscæ -	2.9	B 3	12 32 37.903	3.5596	- .0088	S. 68 43 1.29	19.842	- .029
γ Centauri -	2.4	A o	12 37 19.031	+ 3.3180	- .0196	S. 48 32 33.70	- 19.779	- .020
γ Virginis (mean) -	2.9	F o	12 37 48.491	3.0768	- .0375	S. 1 1 58.28	19.773	+ .005
ρ Virginis -	5.0	A o	12 38 2.309	3.0312	+ .0059	N. 10 39 14.73	19.769	- .107
β Muscæ -	3.3	B 3	12 41 36.133	3.6608	- .0053	S. 67 41 32.58	19.716	- .031
β Crucis -	1.5	B 1	12 43 16.048	3.4947	- .0064	S. 59 16 25.21	19.689	- .033
35 Virginis -	6.7	M a	12 43 59.213	+ 3.0550	- .0004	N. 3 59 14.89	- 19.676	- .012
31 Comæ -	5.1	G o	12 47 59.871	2.9254	- .0023	N. 27 57 14.08	19.606	- .024
ψ Virginis -	4.9	M b	12 50 23.888	3.1197	- .0024	S. 9 7 35.59	19.562	- .028
ε Ursæ Maj. -	1.7	A o p	12 50 41.463	2.6320	+ .0138	N. 56 22 19.46	19.556	- .013
δ Virginis -	3.7	M a	12 51 46.455	3.0528	- .0318	N. 3 48 36.60	19.536	- .060
12 Canum Ven. -	2.9	A o p	12 52 28.525	+ 2.8296	- .0203	N. 38 43 42.65	- 19.522	+ .049
ε Virginis -	3.0	K o	12 58 23.619	3.0050	- .0186	N. 11 22 2.25	19.398	+ .015
θ Virginis -	4.4	A o	13 6 0.761	3.1069	- .0029	S. 5 8 1.11	19.219	- .040
γ Hydræ -	3.3	G 5	13 14 47.134	3.2526	+ .0046	S. 22 46 15.52	18.986	- .053
ι Centauri -	2.9	A 2	13 16 19.009	+ 3.3938	- .0294	S. 36 18 42.72	- 18.943	- .097

PROPER NAMES.—β Leonis - *Denebola*.

NOTE.—α Crucis. Both mean and apparent places are those of the brighter star.

208 MEAN PLACES OF STARS, 1924.

FOR JANUARY 1^d. 126

Star's Name.	Mag	Spect.	Right Ascension.	Annual Precession.	Annual Proper Motion.	Declination.	Annual Precession.	Annual Proper Motion.
			h m s	s	s			
ξ ¹ Ursæ Maj. -	2.4	A o p	13 20 52.197	+ 2.4053	+ 0.153	N. 55 19 18.77	- 18.809	- 0.30
α Virginis -	1.2	B 2	13 21 11.194	3.1609	- 0.028	S. 10 45 54.06	18.800	- 0.32
i Virginis -	5.6	K 2	13 22 42.068	3.1758	- 0.096	S. 12 18 45.14	18.753	- 0.23
ζ Virginis -	3.4	A 2	13 30 49.119	3.0746	- 0.195	S. 0 12 27.97	18.491	+ 0.39
ε Centauri -	2.6	B 1	13 35 3.613	3.7895	- 0.039	S. 53 45 0.65	18.345	- 0.39
m Virginis -	5.2	M a	13 37 37.221	+ 3.1535	- 0.073	S. 8 19 12.16	- 18.252	+ 0.32
τ Boötis -	4.5	F 5	13 43 39.027	2.8849	- 0.341	N. 17 50 5.72	18.029	+ 0.26
η Ursæ Maj. -	1.9	B 3	13 44 32.913	2.3789	- 0.118	N. 49 41 31.41	17.995	- 0.23
μ Centauri -	3.3	B 2 p	13 45 1.785	3.6069	- 0.028	S. 42 54 4.15	17.977	- 0.19
ζ Centauri -	3.1	B 2 p	13 50 47.321	3.7369	- 0.070	S. 46 54 54.14	17.748	- 0.64
η Boötis -	2.8	G o	13 51 3.965	+ 2.8611	- 0.044	N. 18 46 41.22	- 17.737	- 0.363
τ Virginis -	4.3	A 2	13 57 46.629	3.0509	+ 0.010	N. 1 54 42.11	17.456	- 0.29
β Centauri -	0.9	B 1	13 58 26.706	4.2168	- 0.033	S. 60 0 25.82	17.427	- 0.33
π Hydræ -	3.5	K o	14 2 2.294	3.4083	+ 0.030	S. 26 19 1.29	17.270	- 0.153
θ Centauri -	2.3	K o	14 2 12.168	3.5662	- 0.437	S. 35 59 48.41	17.262	- 0.525
94 Virginis -	6.6	A o	14 2 16.112	+ 3.1747	- 0.010	S. 8 31 46.79	- 17.258	+ 0.009
α Draconis -	3.6	Λ o	14 2 19.926	1.6320	- 0.071	N. 64 44 19.27	17.256	+ 0.11
κ Virginis -	4.3	K o	14 8 50.338	3.1973	+ 0.006	S. 9 55 14.44	16.960	+ 0.132
α Boötis -	0.2	K o	14 12 11.650	2.8136	- 0.779	N. 19 34 38.70	16.802	- 2.004
2 Libræ -	6.3	K o	14 19 20.049	3.2264	- 0.014	S. 11 22 3.60	16.451	- 0.67
f Boötis -	5.4	A 5	14 22 55.234	+ 2.7954	- 0.052	N. 19 34 4.25	- 16.271	+ 0.15
ρ Boötis -	3.8	K o	14 28 33.313	2.5937	- 0.073	N. 30 42 15.61	15.979	+ 0.113
γ Boötis -	3.0	F o	14 29 1.119	2.4260	- 0.091	N. 38 38 24.18	15.955	+ 0.145
η Centauri -	2.7	B 3 p	14 30 40.417	3.8036	- 0.032	S. 41 49 29.29	15.866	- 0.32
α Centauri -	0.3	G o	14 34 25.463	4.5479	- 4.866	S. 60 31 21.39	15.664	+ 0.721
α Circini -	3.4	F o	14 36 20.566	+ 4.8508	- 0.320	S. 64 38 43.04	- 15.559	- 0.238
α Lupi -	2.9	B 2	14 36 51.941	3.9808	- 0.020	S. 47 3 47.04	15.530	- 0.36
ε Boötis -	2.7	K o p	14 41 40.076	2.6238	- 0.035	N. 27 23 37.75	15.259	+ 0.009
α Libræ -	2.9	A 2	14 46 40.210	+ 3.3230	- 0.078	S. 15 43 36.64	14.973	- 0.77
β Ursæ Min. -	2.2	K 5	14 50 54.666	- 0.1892	- 0.065	N. 74 27 57.76	14.725	+ 0.003
ξ ² Libræ -	5.6	K o	14 52 38.439	+ 3.2523	- 0.006	S. 11 6 13.96	- 14.620	- 0.001
β Lupi -	2.8	B 2 p	14 53 32.586	3.9236	- 0.070	S. 42 49 44.55	14.568	- 0.62
κ Centauri -	3.4	B 3	14 54 12.555	3.8960	- 0.021	S. 41 48 1.09	14.527	- 0.33
β Boötis -	3.6	G 5	14 59 5.002	2.2636	- 0.036	N. 40 41 22.50	14.230	- 0.40
γ Scorpii -	3.4	M a	14 59 37.054	3.5123	- 0.056	S. 24 59 3.00	14.197	- 0.48
ψ Boötis -	4.7	K o	15 1 11.327	+ 2.5837	- 0.133	N. 27 14 35.37	- 14.100	- 0.14
57 B Ursæ Min. -	7.2	K o	15 1 26.994	- 18.9327	- 0.071	N. 87 31 32.63	14.084	+ 0.31
ζ Lupi -	3.5	K o	15 6 48.882	+ 4.3092	- 0.126	S. 51 48 39.43	13.746	- 0.66
ι Libræ -	4.7	A o p	15 7 53.099	3.4188	- 0.032	S. 19 30 18.62	13.678	- 0.47
γ Triang. Aust. -	3.1	A o	15 11 47.284	5.5790	- 0.137	S. 68 24 1.60	13.426	- 0.42
δ Boötis -	3.5	K o	15 12 26.341	+ 2.4119	+ 0.075	N. 33 35 50.96	- 13.384	- 0.125
β Libræ -	2.7	B 8	15 12 54.871	3.2325	- 0.066	S. 9 6 12.45	13.353	- 0.24
o ² Libræ -	6.7	K 2	15 18 47.239	+ 3.3433	- 0.005	S. 14 51 49.97	12.964	+ 0.003
γ ² Ursæ Min. -	3.1	A 2	15 20 50.278	- 0.1072	- 0.020	N. 72 6 15.78	12.828	+ 0.13
ι Draconis -	3.5	K o	15 23 14.331	+ 1.3332	+ 0.014	N. 59 13 54.34	- 12.667	+ 0.10

PROPER NAMES.—α Virginis - *Spica*.α Boötis - *Arcturus*.

NOTE.—α Centauri. The mean place is that of the centre of gravity of the system; the apparent places, those of the brighter star. The apparent places are affected with a parallax of 0".75.

MEAN PLACES OF STARS, 1924. 209

FOR JANUARY 1^d. 126

Star's Name.	Mag.	Spect.	Right Ascension.	Annual Precession.	Annual Proper Motion.	Declination.	Annual Precession.	Annual Proper Motion.
			h m s	s	s			
32 Libræ -	5.9	K o	15 23 58.010	+ 3.3795	+ .0006	S. 16 27 9.41	- 12.615	- .043
ρ Octantis -	5.7	A 2	15 25 30.492	13.3797	+ .0843	S. 84 12 57.78	12.512	+ .081
113 G Lupi -	3.0	B 3	15 30 4.150	3.9918	- .0020	S. 40 54 45.87	12.198	- .049
α Coronæ Bor.	2.3	A o	15 31 28.169	2.5307	+ .0090	N. 26 58 10.33	12.100	- .100
α Serpentis -	2.8	K o	15 40 31.376	2.9447	+ .0089	N. 6 39 49.48	11.460	+ .043
μ Serpentis -	3.6	A o	15 45 39.108	+ 3.1350	- .0058	S. 3 11 55.29	- 11.089	- .028
ζ Ursæ Min.	4.3	A 2	15 46 44.342	- 2.1940	+ .0082	N. 78 1 44.34	11.009	- .004
ϵ Serpentis -	3.8	A o	15 47 1.546	+ 2.9808	+ .0081	N. 4 42 20.34	10.989	+ .070
β Triang. Aust.	3.0	F o	15 48 25.839	5.2940	- .0290	S. 63 11 52.14	10.886	- .408
γ Serpentis -	3.9	F 8	15 52 56.488	2.7490	+ .0213	N. 15 54 30.86	10.552	- 1.294
π Scorpii -	3.0	B 2 p	15 54 14.973	+ 3.6263	- .0015	S. 25 53 48.00	- 10.455	- .037
δ Scorpii -	2.5	B 1 p	15 55 50.134	3.5448	- .0011	S. 22 24 23.89	10.336	- .035
β^1 Scorpii -	2.9	B 1	16 1 0.830	3.4859	- .0011	S. 19 35 54.92	9.946	- .028
δ Ophiuchi -	3.0	M a	16 10 21.650	3.1453	- .0031	S. 3 29 58.91	9.228	- .144
γ^2 Normæ -	4.1	K o	16 14 8.513	4.4970	- .0216	S. 49 58 14.39	8.933	- .064
ϵ Ophiuchi -	3.3	K o	16 14 17.877	+ 3.1672	+ .0054	S. 4 30 30.12	- 8.921	+ .037
σ Scorpii -	3.1	B 1	16 16 33.908	3.6441	- .0011	S. 25 24 42.56	8.743	- .033
γ Herculis -	3.8	F o	16 18 33.996	2.6492	- .0034	N. 19 19 49.95	8.585	+ .037
η Draconis -	2.9	G 5	16 22 57.552	0.8115	- .0020	N. 61 41 9.18	8.236	+ .058
α Scorpii -	1.2	M a p	16 24 44.648	3.6761	- .0006	S. 26 15 52.73	8.094	- .028
β Herculis -	2.8	K o	16 26 57.075	+ 2.5854	- .0076	N. 21 39 14.83	- 7.916	- .025
λ Ophiuchi -	3.9	A o	16 27 4.718	3.0267	- .0023	N. 2 8 56.27	7.906	- .090
τ Scorpii -	2.9	B o	16 31 8.848	3.7323	- .0011	S. 28 3 35.14	7.578	- .033
ζ Ophiuchi -	2.7	B o	16 32 58.303	3.3009	+ .0007	S. 10 24 51.64	7.430	+ .022
24 Scorpii -	5.0	K o	16 37 10.488	3.4692	- .0019	S. 17 35 46.82	7.087	- .002
ζ Herculis -	3.0	G o	16 38 25.248	+ 2.2980	- .0364	N. 31 44 22.64	- 6.984	+ .390
η Herculis -	3.6	K o	16 40 17.376	2.0530	+ .0031	N. 39 3 57.22	6.832	- .093
α Triang. Aust.	1.9	K 2	16 40 36.054	6.3286	+ .0028	S. 68 53 25.67	6.807	- .049
ϵ Scorpii -	2.4	K o	16 45 14.192	3.9317	- .0505	S. 34 9 24.66	6.424	- .264
ζ Aræ -	3.1	K 5	16 52 19.145	+ 4.9591	- .0015	S. 55 52 19.22	5.835	- .048
ϵ Ursæ Min.	4.4	G 5	16 53 41.806	- 6.2345	+ .0057	N. 82 9 52.93	- 5.718	- .001
κ Ophiuchi -	3.4	K o	16 54 4.184	+ 2.8585	- .0199	N. 9 29 31.41	5.688	- .011
30 Ophiuchi -	5.0	K o	16 57 3.142	3.1653	- .0018	S. 4 6 35.27	5.434	- .076
ϵ Herculis -	3.9	A o	16 57 22.868	2.2985	- .0036	N. 31 2 14.53	5.409	+ .023
η Ophiuchi -	2.6	A o	17 6 1.015	3.4364	+ .0017	S. 15 37 55.47	4.678	+ .091
ζ Draconis -	3.2	B 5	17 8 33.833	+ 0.1728	- .0021	N. 65 48 29.16	- 4.462	+ .018
α Herculis -	ar.	M b	17 11 10.873	2.7356	- .0008	N. 14 28 32.91	4.237	+ .029
δ Herculis -	3.2	A o	17 11 54.539	2.4653	- .0019	N. 24 55 40.19	4.176	- .158
π Herculis -	3.4	K 2	17 12 23.936	2.0912	- .0025	N. 36 53 38.13	4.133	- .001
θ Ophiuchi -	3.4	B 3	17 17 20.396	3.6830	- .0006	S. 24 55 30.48	3.709	- .036
β Aræ -	2.8	K 2	17 18 58.699	+ 4.9832	- .0004	S. 55 27 35.13	- 3.569	- .027
σ Ophiuchi -	4.4	K o	17 22 44.584	2.9758	+ .0002	N. 4 12 19.14	3.242	+ .008
ν Scorpii -	2.8	B 3	17 25 35.538	4.0770	- .0024	S. 37 14 12.24	2.998	- .039
α Aræ -	3.0	B 3 p	17 25 57.809	+ 4.6376	- .0035	S. 49 49 3.72	- 2.966	- .083

PROPER NAMES.— α Scorpii - *Antares*.

VARIABLE STARS.— α Herculis. The limits of magnitude are 3.1 and 3.9. Period irregular.

210 MEAN PLACES OF STARS, 1924.

FOR JANUARY 1^d.126

Star's Name.	Mag	Spect.	Right Ascension.	Annual Precession.	Annual Proper Motion.	Declination.	Annual Precession.	Annual Proper Motion.
			h m s	s	s	° ' "20	"	"
λ Scorpii -	1.7	B 2	17 28 26.732	+ 4.0720	- .0003	S. 37 2 59.20	- 2.751	- .027
β Draconis	3.0	G 0	17 28 42.874	1.3564	- .0017	N. 52 21 25.38	2.728	+ .009
α Ophiuchi	2.1	A 5	17 31 24.345	2.7760	+ .0080	N. 12 36 50.93	2.494	- .235
θ Scorpii -	2.0	F 0	17 31 51.236	4.3074	- .0009	S. 42 57 3.77	2.456	- .009
κ Scorpii -	2.5	B 2	17 37 13.658	4.1493	- .0015	S. 38 59 32.25	1.988	- .026
η Pavonis -	3.6	K 0	17 38 16.096	+ 5.8858	- .0027	S. 64 41 23.11	- 1.898	- .080
β Ophiuchi	2.9	K 0	17 39 43.054	2.9657	- .0026	N. 4 35 52.40	1.772	+ .158
ι ¹ Scorpii -	3.1	F 5 p	17 42 15.997	4.1947	- .0011	S. 40 5 56.41	1.549	- .003
μ Herculis	3.5	G 5	17 43 29.003	2.3711	- .0237	N. 27 45 50.99	1.444	- .749
89 Herculis	5.5	F 2	17 52 21.256	2.4196	+ .0013	N. 26 34 0.03	0.667	+ .006
γ Draconis	2.4	K 5	17 54 50.466	+ 1.3934	- .0006	N. 51 29 49.98	- 0.451	- .024
ν Ophiuchi	3.5	K 0	17 54 50.508	+ 3.3027	- .0006	S. 9 45 56.04	0.451	- .120
δ Ursæ Min.	4.4	A 0	17 56 44.830	- 19.5106	+ .0169	N. 86 36 50.21	- 0.284	+ .048
γ Sagittarii	3.1	K 0	18 0 55.447	+ 3.8576	- .0055	S. 30 25 35.52	+ 0.081	- .198
72 Ophiuchi	3.7	A 2	18 3 44.751	2.8479	- .0045	N. 9 33 7.22	0.327	+ .087
μ Sagittarii	4.0	B 8 p	18 9 13.052	+ 3.5874	- .0004	S. 21 4 48.34	+ 0.806	- .002
η Sagittarii	3.2	M b	18 12 29.022	4.0705	- .0117	S. 36 47 9.44	1.091	- .163
δ Sagittarii	2.8	K 0	18 16 7.705	3.8381	+ .0027	S. 29 51 42.64	1.409	- .032
η Serpentis	3.4	K 0	18 17 22.568	3.1407	- .0378	S. 2 55 10.78	1.518	- .692
ε Sagittarii	2.0	A 0	18 19 7.625	3.9854	- .0041	S. 34 25 18.86	1.671	- .122
α Telescopii	3.8	B 3	18 21 20.313	+ 4.4511	- .0016	S. 46 0 43.27	+ 1.863	- .068
λ Sagittarii	2.9	K 0	18 23 16.806	3.7059	- .0037	S. 25 27 54.39	2.033	- .188
α Lyræ -	0.1	A 0	18 34 21.915	2.0138	+ .0177	N. 38 42 43.46	2.995	+ .280
4 H Scuti -	4.7	F 0	18 38 6.823	3.2845	+ .0020	S. 9 7 35.59	3.321	- .006
φ Sagittarii	3.3	B 8	18 40 54.503	3.7449	+ .0034	S. 27 4 13.06	3.562	- .006
λ Pavonis -	4.4	B 2	18 45 10.738	+ 5.5664	- .0030	S. 62 16 35.91	+ 3.925	- .022
30 Sagittarii	6.2	F 0	18 46 16.311	3.6084	- .0041	S. 22 15 0.99	4.022	- .024
β Lyræ -	var.	B 2 p	18 47 16.422	2.2144	+ .0004	N. 33 16 24.73	4.105	- .005
σ Sagittarii	2.1	B 3	18 50 33.153	3.7199	- .0003	S. 26 23 33.61	4.386	- .075
ξ Sagittarii	3.6	K 0	18 53 11.790	+ 3.5774	+ .0018	S. 21 12 28.54	4.611	- .016
λ Ursæ Min.	6.6	M b	18 54 9.948	- 73.4309	- .1129	N. 89 1 37.59	+ 4.693	+ .005
γ Lyræ -	3.3	A 0	18 56 6.002	+ 2.2442	- .0006	N. 32 35 3.63	4.858	- .006
ε Aquilæ -	4.2	K 0	18 56 10.351	2.7263	- .0042	N. 14 57 50.16	4.864	- .080
ζ Sagittarii	2.7	A 2	18 57 46.620	3.8196	- .0021	S. 29 59 24.37	5.000	+ .002
ζ Aquilæ -	3.0	A 0	19 1 54.996	2.7577	- .0008	N. 13 44 57.79	5.350	- .099
τ Sagittarii	3.4	K 0	19 2 11.799	+ 3.7511	- .0046	S. 27 46 58.44	+ 5.376	- .254
λ Aquilæ -	3.6	A 0	19 2 12.935	3.1854	- .0020	S. 4 59 51.27	5.375	- .083
α Coronæ Aust.	4.1	A 2	19 4 18.135	4.0769	+ .0051	S. 38 1 28.45	5.551	- .118
π Sagittarii	3.0	F 2	19 5 14.692	3.5688	- .0005	S. 21 8 44.58	5.630	- .036
ψ Sagittarii	4.9	F 5	19 10 52.887	3.6769	+ .0025	S. 25 23 20.61	6.103	- .035
δ Draconis	3.2	K 0	19 12 32.561	+ 0.0027	+ .0175	N. 67 31 40.14	+ 6.239	+ .088
ω Aquilæ -	5.1	A 5	19 14 14.947	2.8160	- .0002	N. 11 27 26.16	6.381	+ .014
δ Aquilæ -	3.4	F 0	19 21 39.993	3.0080	+ .0168	N. 2 57 43.63	6.992	+ .082
59 G Telescopii	5.6	K 2	19 21 42.290	+ 4.8270	- .0009	S. 54 28 45.27	+ 6.999	- .044

PROPER NAMES.—α Lyræ - *Vega*.

VARIABLE STARS.—β Lyræ. The limits of magnitude are 3.4 and 4.1. Period 12.9 days.

MEAN PLACES OF STARS, 1924. 211

FOR JANUARY 1^d. 126

Star's Name.	Mag.	Spect.	Right Ascension.	Annual Precession.	Annual Proper Motion.	Declination.	Annual Precession.	Annual Proper Motion.
			h m s	s	s			
6 Vulpeculæ -	4.6	M a	19 25 32.546	+ 2.5055	- .0097	N. 24 30 36.08	+ 7.311	- .110
β Cygni -	3.2	K o p	19 27 39.358	2.4192	- .0002	N. 27 47 56.62	7.481	- .010
μ Aquilæ -	4.7	K o	19 30 22.631	2.9166	+ .0145	N. 7 12 59.89	7.703	- .146
h Sagittarii -	4.7	B 9	19 32 5.026	3.6476	+ .0045	S. 25 3 9.63	7.839	- .027
54 Sagittarii -	5.5	K o	19 36 22.235	3.4334	+ .0046	S. 16 28 7.48	8.185	- .047
σ Octantis -	5.5	F o	19 38 33.176	+ 91.0721	+ .1055	S. 89 12 33.10	+ 8.356	.000
f Sagittarii -	5.1	K o	19 41 55.802	3.5105	- .0099	S. 19 56 41.92	8.626	- .088
44 G Octantis -	6.3	K o	19 42 6.292	11.1838	- .0055	S. 81 32 37.25	8.638	+ .009
δ Cygni -	3.0	A o	19 42 36.029	1.8705	+ .0055	N. 44 56 40.22	8.677	+ .044
γ Aquilæ -	2.8	K 2	19 42 38.781	2.8512	+ .0007	N. 10 25 37.14	8.680	- .003
α Aquilæ -	0.9	A 5	19 47 4.513	+ 2.8910	+ .0360	N. 8 39 59.34	+ 9.028	+ .379
ι Sagittarii -	4.2	K o	19 50 1.204	4.1425	- .0017	S. 42 4 9.71	9.260	+ .045
β Aquilæ -	3.9	K o	19 51 34.802	2.9442	+ .0025	N. 6 12 57.27	9.378	- .481
g Sagittarii -	5.1	A o	19 53 38.496	3.4030	+ .0004	S. 15 41 38.44	9.539	- .081
c Sagittarii -	4.6	M b	19 57 59.243	3.6892	+ .0021	S. 27 55 20.46	9.870	+ .018
δ Pavonis -	3.6	G 5	20 1 16.881	+ 5.7108	+ .1924	S. 66 22 38.42	+ 10.125	- 1.128
θ Aquilæ -	3.4	A o	20 7 23.041	3.0936	+ .0020	S. 1 2 52.50	10.576	+ .006
4 Capricorni -	6.0	K o	20 13 33.576	3.5246	+ .0012	S. 22 2 45.06	11.034	- .033
α ² Capricorni -	3.8	K o	20 13 50.356	3.3257	+ .0040	S. 12 46 53.23	11.052	+ .008
β Capricorni -	3.3	G o p	20 16 44.567	3.3695	+ .0023	S. 15 1 20.85	11.263	+ .006
γ Cygni -	2.3	F 8 p	20 19 30.017	+ 2.1524	+ .0004	N. 40 0 45.64	+ 11.461	+ .001
α Pavonis -	2.1	B 3	20 19 38.665	4.7589	.0000	S. 56 58 48.35	11.472	- .092
ρ Capricorni -	5.0	F o	20 24 31.657	3.4249	- .0014	S. 18 3 57.39	11.819	- .016
48 G Octantis -	7.1	A o	20 24 43.962	14.6318	+ .0296	S. 84 40 8.67	11.834	+ .034
ε Delphini -	4.0	B 5	20 29 34.941	2.8656	+ .0007	N. 11 2 38.36	12.173	- .025
α Indi -	3.2	K o	20 32 13.553	+ 4.2234	+ .0027	S. 47 33 28.49	+ 12.357	+ .053
α Delphini -	3.9	B 8	20 36 6.495	2.7821	+ .0047	N. 15 38 36.01	12.622	+ .017
β Pavonis -	3.6	A 5	20 38 7.738	5.4406	- .0079	S. 66 28 40.76	12.759	- .003
α Cygni -	1.3	A 2 p	20 38 50.433	2.0445	+ .0004	N. 45 0 28.97	12.806	- .002
ε Cygni -	2.6	K o	20 43 8.162	2.3983	+ .0294	N. 33 41 5.36	13.093	+ .327
ε Aquarii -	3.8	A o	20 43 33.795	+ 3.2468	+ .0017	S. 9 46 29.61	+ 13.122	- .030
μ Aquarii -	4.8	A 3	20 48 33.367	3.2345	+ .0025	S. 9 16 10.39	13.451	- .039
32 Vulpeculæ -	5.2	K 2	20 51 19.233	2.5568	- .0003	N. 27 46 4.27	13.628	+ .004
γ Microscopii -	4.7	G 5	20 56 38.056	3.6847	- .0004	S. 32 33 20.93	13.966	- .004
θ Capricorni -	4.2	A o	21 1 40.624	3.3691	+ .0051	S. 17 32 9.15	14.279	- .066
61 Cygni (1st *) -	5.6	K 5	21 3 29.264	+ 2.3361	+ .3496	N. 38 22 29.52	+ 14.387	+ 3.251
ξ Cygni -	3.4	K o	21 9 42.042	2.5526	- .0002	N. 29 54 51.87	14.761	- .061
α Equulei -	4.1	F 8 p	21 12 1.499	+ 2.9956	+ .0034	N. 4 55 58.22	14.897	- .085
B.A.C. 7504 -	7.4	A 3	21 14 49.476	- 12.3390	+ .0300	N. 86 43 30.34	15.060	+ .030
θ ¹ Microscopii -	4.9	A 2 p	21 15 54.374	+ 3.8388	+ .0070	S. 41 7 53.61	15.123	+ .014
α Cephei -	2.6	A 5	21 16 46.064	+ 1.4119	+ .0224	N. 62 15 47.45	+ 15.172	+ .050
ι Capricorni -	4.3	K o	21 18 1.055	3.3407	+ .0022	S. 17 9 32.67	15.244	+ .004
γ Pavonis -	4.3	F 8	21 20 10.828	4.9745	+ .0152	S. 65 42 41.33	15.366	+ .784
ξ Capricorni -	3.9	G 5 p	21 22 19.899	+ 3.4284	+ .0004	S. 22 44 28.94	+ 15.485	+ .020

PROPER NAMES.—α Aquilæ - *Altair*.

α Cygni - *Deneb*.

NOTES.—α Aquilæ. The apparent places are affected with a parallax of 0".23.

61 Cygni. The apparent places are affected with a parallax of 0".30.

212 MEAN PLACES OF STARS, 1924.

FOR JANUARY 1st 1926

Star's Name.	Mag	Spect.	Right Ascension.	Annual Precession.	Annual Proper Motion.	Declination.	Annual Precession.	Annual Proper Motion.
			h m s	s	s	° ' "	"	"
β Aquarii -	3.1	G o	21 27 33.559	+ 3.1581	+ .0012	S. 5 54 22.85	+ 15.772	- .011
β Cephei -	3.3	B 1	21 27 41.221	0.7802	+ .0026	N. 70 13 36.69	15.779	+ .005
ξ Aquarii -	4.8	A 5	21 33 42.456	3.1874	+ .0075	S. 8 11 44.83	16.099	- .023
ϵ Pegasi -	2.5	K o	21 40 27.176	2.9445	+ .0016	N. 9 31 33.02	16.442	.000
δ Capricorni -	3.0	A 5	21 42 50.892	3.2954	+ .0176	S. 16 28 22.48	16.561	- .297
γ Gruis -	3.2	B 8	21 49 19.891	+ 3.6307	+ .0077	S. 37 43 23.28	+ 16.874	- .021
16 Pegasi -	5.1	B 3	21 49 36.183	2.7284	+ .0005	N. 25 34 1.41	16.887	+ .006
α Aquarii -	3.2	G o	22 1 52.868	3.0807	+ .0010	S. 0 41 22.60	17.441	- .002
α Gruis -	2.2	B 5	22 3 27.014	3.7786	+ .0110	S. 47 19 48.16	17.508	- .174
ι Pegasi -	4.0	F 5	22 3 28.289	2.7698	+ .0219	N. 24 58 23.80	17.509	+ .022
ζ Cephei -	3.6	K o	22 8 12.916	+ 2.0773	+ .0018	N. 57 49 34.64	+ 17.708	+ .010
θ Aquarii -	4.3	K o	22 12 49.462	3.1591	+ .0074	S. 8 9 44.06	17.892	- .018
α Tucanæ -	2.9	K 2	22 13 18.407	4.1391	- .0118	S. 60 38 19.97	17.912	- .035
ν Octantis -	5.7	K o	22 17 34.083	12.1410	- .0400	S. 86 21 20.28	18.076	+ .074
γ Aquarii -	4.0	A o	22 17 43.877	3.0906	+ .0081	S. 1 46 14.59	18.082	+ .015
σ Aquarii -	4.9	A o	22 26 37.627	+ 3.1763	.0000	S. 11 4 2.26	+ 18.406	- .026
η Aquarii -	4.1	B 8	22 31 27.085	3.0772	+ .0057	S. 0 30 34.73	18.567	- .053
κ Aquarii -	5.3	K o	22 33 49.286	3.1125	- .0049	S. 4 37 13.61	18.646	- .113
ζ Pegasi -	3.6	B 8	22 37 40.266	2.9862	+ .0054	N. 10 26 2.89	18.766	- .014
β Gruis -	2.2	M b	22 38 8.195	3.5788	+ .0133	S. 47 16 57.74	18.779	- .026
η Pegasi -	3.1	G o	22 39 26.234	+ 2.8091	+ .0011	N. 29 49 23.49	+ 18.819	- .037
ϵ Gruis -	3.7	A 2	22 43 58.282	3.6242	+ .0093	S. 51 43 0.56	18.952	- .059
μ Pegasi -	3.7	K o	22 46 19.985	2.8831	+ .0109	N. 24 11 59.57	19.018	- .041
λ Aquarii -	3.8	M a	22 48 39.027	3.1302	+ .0002	S. 7 59 3.92	19.081	+ .035
δ Aquarii -	3.5	A 2	22 50 37.107	3.1887	- .0034	S. 16 13 31.38	19.134	- .026
α Piscis Aust.	1.3	A 3	22 53 27.288	+ 3.2939	+ .0252	S. 30 1 31.77	+ 19.206	- .171
β Piscium -	4.6	B 5	23 0 0.561	3.0522	+ .0008	N. 3 24 38.11	19.362	- .006
β Pegasi -	var.	M a	23 0 5.249	2.8917	+ .0146	N. 27 40 12.70	19.364	+ .135
α Pegasi -	2.6	A o	23 0 58.410	2.9829	+ .0040	N. 14 47 45.80	19.383	- .039
ϵ^2 Aquarii -	3.8	K o	23 5 23.785	3.1976	+ .0032	S. 21 35 7.03	19.479	+ .041
γ Tucanæ -	4.1	F 2	23 13 0.164	+ 3.5195	- .0057	S. 58 39 10.99	+ 19.625	+ .060
γ Piscium -	3.9	K o	23 13 13.498	3.0592	+ .0503	N. 2 52 0.14	19.629	+ .018
ψ^3 Aquarii -	5.2	A o	23 15 0.556	3.1188	+ .0027	S. 10 1 35.54	19.660	- .001
τ Pegasi -	4.7	A 5	23 16 52.350	2.9650	+ .0018	N. 23 19 26.60	19.691	- .012
κ Piscium -	4.9	A 2 p	23 23 2.185	+ 3.0696	+ .0056	N. 0 50 21.90	19.785	- .093
39 H Cephei -	5.6	F o	23 27 42.077	- 0.3800	+ .0646	N. 86 53 17.96	+ 19.846	+ .020
ι Phœnicis -	4.8	A 2 p	23 30 59.413	+ 3.2301	+ .0008	S. 43 2 7.95	19.885	- .004
ι Piscium -	4.3	G o	23 36 2.417	3.0601	+ .0246	N. 5 12 51.26	19.935	- .436
γ Cephei -	3.4	K o	23 36 12.959	2.4630	- .0173	N. 77 12 29.48	19.937	+ .157
λ Piscium -	4.6	A 5	23 38 10.083	3.0698	- .0092	N. 1 21 41.92	19.954	- .154
δ Sculptoris -	4.6	A o	23 44 58.129	+ 3.1204	+ .0059	S. 28 33 3.80	+ 20.002	- .133
ϕ Pegasi -	5.2	M a	23 48 37.121	3.0503	- .0013	N. 18 41 53.26	20.020	- .039
27 Piscium -	5.1	K o	23 54 46.922	3.0749	- .0037	S. 3 58 39.57	20.040	- .068
ω Piscium -	4.0	F 5	23 55 24.456	3.0698	+ .0102	N. 6 26 33.45	20.041	- .108
2 Ceti -	4.6	A o	23 59 50.851	+ 3.0731	+ .0012	S. 17 45 32.59	+ 20.045	- .004

PROPER NAMES.— α Piscis Australis - *Fomalhaut*. α Pegasi - *Márkab*.VARIABLE STARS.— β Pegasi. The limits of magnitude are 2.2 and 2.7. Period irregular.

APPARENT PLACES OF STARS, 1924. 213

Mean Midnight.		<i>t</i>	BESSEL'S DAY NUMBERS.			
			Log. A.	Log. B.	Log. C.	Log. D.
Jan.	1	0.00102	−9.13915	+0.95103	−0.52725	+1.30402
	6	0.01471	9.08350	0.94802	0.69855	1.29519
	11	0.02840	9.02131	0.94417	0.81843	1.28265
	16	0.04209	8.95143	0.93957	0.90949	1.26619
	21	0.05578	−8.87181	−0.93438	−0.98180	+1.24551
	26	0.06947	8.77945	0.92868	1.04073	1.22021
	31	0.08316	8.66922	0.92267	1.08950	1.18974
	Feb.	5	0.09685	8.53161	0.91638	1.13019
	10	0.11054	−8.34518	+0.91007	−1.16421	+1.10996
	15	0.12423	8.04297	0.90390	1.19256	1.05801
	20	0.13792	−6.85126	0.89793	1.21594	0.99526
	25	0.15161	+7.95231	0.89254	1.23488	0.91807
Mar.	1	0.16530	+8.25648	+0.88762	−1.24977	+0.82027
	6	0.17899	8.42586	0.88346	1.26089	0.68977
	11	0.19268	8.54258	0.88010	1.26850	0.49780
	16	0.20637	8.63246	0.87772	1.27270	+0.13919
	21	0.22006	+8.70586	+0.87625	−1.27361	−9.59835
	26	0.23375	8.76901	0.87570	1.27125	0.33500
	31	0.24744	8.82517	0.87613	1.26563	0.59183
	Apr.	5	0.26113	8.87662	0.87734	1.25668	0.74949
	10	0.27482	+8.92464	+0.87941	−1.24431	−0.86221
	15	0.28851	8.97016	0.88213	1.22832	0.94881
	20	0.30219	9.01393	0.88530	1.20847	1.01813
	25	0.31588	9.05606	0.88897	1.18412	1.07498
May	30	0.32957	+9.09684	+0.89279	−1.15572	−1.12230
	5	0.34326	9.13640	0.89667	1.12172	1.16204
	10	0.35695	9.17468	0.90048	1.08153	1.19553
	15	0.37064	9.21173	0.90410	1.03391	1.22368
	20	0.38433	+9.24748	+0.90733	−0.97704	−1.24717
	25	0.39802	9.28189	0.91014	0.90818	1.26649
	30	0.41171	9.31484	0.91236	0.82280	1.28203
	June	4	0.42540	9.34635	0.91395	0.71273	1.29406
	9	0.43909	+9.37639	+0.91480	−0.56085	−1.30282
	14	0.45278	9.40490	0.91492	0.32027	1.30841
	19	0.46647	9.43186	0.91429	−9.72428	1.31095
	24	0.48016	9.45732	0.91278	+0.01397	1.31046
July	29	0.49385	+9.48123	+0.91052	+0.41280	−1.30696
	4	0.50754	+9.50365	+0.90744	+0.61521	−1.30040

214 APPARENT PLACES OF STARS, 1924.

Mean Midnight.		<i>t</i>	BESSEL'S DAY NUMBERS.			
			Log. A.	Log. B.	Log. C.	Log. D.
July	4	0.50754	+9.50365	+0.90744	+0.61521	-1.30040
	9	0.52123	9.52456	0.90358	0.75060	1.29066
	14	0.53492	9.54406	0.89905	0.85135	1.27761
	19	0.54861	9.56212	0.89382	0.93060	1.26104
Aug.	24	0.56230	+9.57887	+0.88798	+0.99503	-1.24065
	29	0.57599	9.59431	0.88164	1.04851	1.21606
	3	0.58968	9.60850	0.87503	1.09344	1.18674
	8	0.60336	9.62158	0.86817	1.13147	1.15198
	13	0.61705	+9.63356	+0.86118	+1.16368	-1.11077
	18	0.63074	9.64456	0.85431	1.19086	1.06174
	23	0.64443	9.65469	0.84763	1.21357	1.00288
	28	0.65812	9.66399	0.84136	1.23225	0.93101
Sept.	2	0.67181	+9.67264	+0.83566	+1.24724	-0.84085
	7	0.68550	9.68070	0.83052	1.25874	0.72249
	12	0.69919	9.68829	0.82624	1.26694	0.55415
	17	0.71288	9.69556	0.82282	1.27189	0.26851
Oct.	22	0.72657	+9.70257	+0.82053	+1.27368	-9.04805
	27	0.74026	9.70948	0.81918	1.27229	+0.21421
	2	0.75395	9.71640	0.81892	1.26768	0.52890
	7	0.76764	9.72343	0.81965	1.25975	0.70781
	12	0.78133	+9.73065	+0.82138	+1.24835	+0.83210
	17	0.79502	9.73813	0.82397	1.23325	0.92623
	22	0.80871	9.74595	0.82721	1.21416	1.00099
	27	0.82240	9.75416	0.83107	1.19071	1.06205
Nov.	1	0.83609	+9.76277	+0.83528	+1.16233	+1.11279
	6	0.84978	9.77178	0.83960	1.12830	1.15536
	11	0.86347	9.78120	0.84392	1.08761	1.19115
	16	0.87716	9.79099	0.84800	1.03889	1.22117
Dec.	21	0.89085	+9.80108	+0.85178	+0.98006	+1.24613
	26	0.90453	9.81142	0.85494	0.90788	1.26656
	1	0.91822	9.82196	0.85742	0.81695	1.28285
	6	0.93191	9.83258	0.85908	0.69707	1.29530
	11	0.94560	+9.84321	+0.85986	+0.52558	+1.30408
	16	0.95929	9.85378	0.85959	0.23096	1.30933
	21	0.97298	9.86418	0.85830	+8.55388	1.31112
	26	0.98667	9.87435	0.85591	-0.21256	1.30948
	31	1.00036	+9.88420	+0.85239	-0.51677	+1.30438
	36	1.01405	+9.89370	+0.84776	-0.69183	+1.29571

APPARENT PLACES OF STARS, 1924. 215

BESSEL'S DAY NUMBERS.

Mean Midnight.		Log. A.	Log. B.	Log. C.	Log. D.	Log. A'.	Log. B'.
Jan.	1	—9·1392	+0·9510	—0·5273	+1·3040	—7·631	—8·279
	2	9·1285	0·9505	0·5677	1·3025	—7·597	+8·279
	3	9·1176	0·9499	0·6045	1·3009	—7·435	+8·716
	4	9·1065	0·9493	0·6383	1·2992	—6·900	+8·851
	5	9·0951	0·9487	0·6695	1·2973	+7·118	+8·863
	6	—9·0835	+0·9480	—0·6985	+1·2952	+7·505	+8·756
	7	9·0716	0·9473	0·7256	1·2930	+7·644	+8·447
	8	9·0594	0·9466	0·7510	1·2906	+7·678	—7·699
	9	9·0470	0·9458	0·7748	1·2881	+7·635	—8·531
	10	9·0343	0·9450	0·7972	1·2855	+7·505	—8·748
	11	—9·0213	+0·9442	—0·8184	+1·2827	+7·243	—8·826
	12	9·0080	0·9433	0·8385	1·2797	+6·201	—8·799
	13	8·9944	0·9424	0·8576	1·2766	—7·090	—8·699
	14	8·9805	0·9414	0·8757	1·2733	—7·355	—8·462
	15	8·9661	0·9405	0·8930	1·2698	—7·453	—7·602
	16	—8·9514	+0·9396	—0·9095	+1·2662	—7·468	+8·322
	17	8·9364	0·9386	0·9252	1·2624	—7·402	+8·652
	18	8·9209	0·9376	0·9403	1·2585	—7·243	+8·785
	19	8·9050	0·9365	0·9547	1·2543	—6·760	+8·833
	20	8·8886	0·9355	0·9685	1·2500	+6·854	+8·799
	21	—8·8718	+0·9344	—0·9818	+1·2455	+7·257	+8·653
	22	8·8545	0·9332	0·9945	1·2408	+7·391	+8·204
	23	8·8366	0·9321	1·0068	1·2360	+7·388	—8·255
	24	8·8182	0·9310	1·0185	1·2309	+7·227	—8·699
	25	8·7991	0·9299	1·0298	1·2257	+6·502	—8·851
	26	—8·7795	+0·9287	—1·0407	+1·2202	—7·143	—8·875
	27	8·7591	0·9275	1·0512	1·2146	—7·465	—8·792
	28	8·7378	0·9263	1·0613	1·2087	—7·593	—8·519
	29	8·7159	0·9251	1·0711	1·2026	—7·606	+7·699
	30	8·6931	0·9239	1·0805	1·1963	—7·502	+8·602
Feb.	31	—8·6692	+0·9227	—1·0895	+1·1897	—7·190	+8·813
	1	8·6443	0·9214	1·0982	1·1830	+6·660	+8·875
	2	8·6183	0·9201	1·1067	1·1760	+7·381	+8·813
	3	8·5908	0·9189	1·1148	1·1687	+7·588	+8·602
	4	8·5620	0·9176	1·1226	1·1612	+7·656	+7·845
	5	—8·5316	+0·9164	—1·1302	+1·1534	+7·635	—8·415
	6	8·4991	0·9151	1·1375	1·1453	+7·534	—8·716
	7	8·4648	0·9139	1·1445	1·1369	+7·307	—8·813
	8	8·4280	0·9126	1·1513	1·1282	+6·696	—8·820
	9	8·3883	0·9113	1·1579	1·1193	—6·979	—8·740
	10	—8·3452	+0·9101	—1·1642	+1·1100	—7·319	—8·556
	11	8·2980	0·9088	1·1703	1·1003	—7·447	—8·079
	12	8·2457	0·9076	1·1762	1·0903	—7·486	+8·146
	13	8·1872	0·9063	1·1819	1·0799	—7·447	+8·580
	14	8·1206	0·9051	1·1873	1·0692	—7·319	+8·756
	15	—8·0430	+0·9039	—1·1926	+1·0580	—7·014	+8·833
	16	—7·9504	+0·9027	—1·1976	+1·0464	+6·298	+8·820

216 APPARENT PLACES OF STARS, 1924.

BESSEL'S DAY NUMBERS.

Mean Midnight.		Log. A.	Log. B.	Log. C.	Log. D.	Log. A'.	Log. B'.
Feb.	16	— 7.9504	+ 0.9027	— 1.1976	+ 1.0464	+ 6.298	+ 8.820
	17	7.8344	0.9015	1.2025	1.0344	+ 7.149	+ 8.716
	18	7.6776	0.9003	1.2071	1.0219	+ 7.355	+ 8.415
	19	7.4346	0.8991	1.2116	1.0088	+ 7.402	— 7.903
	20	— 6.8513	0.8979	1.2159	0.9953	+ 7.319	— 8.613
	21	+ 7.1072	+ 0.8968	— 1.2201	+ 0.9811	+ 6.988	— 8.826
	22	7.5106	0.8957	1.2240	0.9664	— 6.789	— 8.886
	23	7.7135	0.8947	1.2278	0.9510	— 7.347	— 8.845
	24	7.8494	0.8936	1.2314	0.9349	— 7.531	— 8.653
	25	7.9523	0.8925	1.2349	0.9181	— 7.581	— 7.954
	26	+ 8.0346	+ 0.8915	— 1.2382	+ 0.9004	— 7.516	+ 8.447
	27	8.1028	0.8905	1.2413	0.8819	— 7.280	+ 8.763
	28	8.1608	0.8895	1.2443	0.8624	— 4.298	+ 8.869
	29	8.2114	0.8885	1.2471	0.8419	+ 7.289	+ 8.845
Mar.	1	8.2565	0.8876	1.2498	0.8203	+ 7.548	+ 8.699
	2	+ 8.2967	+ 0.8867	— 1.2523	+ 0.7974	+ 7.644	+ 8.279
	3	8.3333	0.8858	1.2547	0.7730	+ 7.650	— 8.146
	4	8.3666	0.8850	1.2569	0.7471	+ 7.572	— 8.633
	5	8.3974	0.8842	1.2590	0.7195	+ 7.377	— 8.785
	6	8.4259	0.8835	1.2609	0.6898	+ 6.932	— 8.820
	7	+ 8.4523	+ 0.8828	— 1.2627	+ 0.6578	— 6.817	— 8.771
	8	8.4768	0.8821	1.2644	0.6231	— 7.271	— 8.623
	9	8.5000	0.8814	1.2659	0.5854	— 7.435	— 8.279
	10	8.5218	0.8807	1.2673	0.5438	— 7.494	+ 7.903
	11	8.5426	0.8801	1.2685	0.4978	— 7.477	+ 8.519
	12	+ 8.5623	+ 0.8795	— 1.2696	+ 0.4462	— 7.381	+ 8.724
	13	8.5810	0.8790	1.2706	0.3875	— 7.179	+ 8.826
	14	8.5990	0.8786	1.2714	0.3194	— 6.528	+ 8.833
	15	8.6162	0.8781	1.2721	0.2386	+ 6.921	+ 8.763
	16	8.6325	0.8777	1.2727	0.1392	+ 7.262	+ 8.556
	17	+ 8.6482	+ 0.8774	— 1.2731	+ 0.0098	+ 7.363	+ 7.602
	18	8.6633	0.8770	1.2734	9.8247	+ 7.323	— 8.477
	19	8.6780	0.8767	1.2736	+ 9.4953	+ 7.097	— 8.763
	20	8.6921	0.8765	1.2737	— 8.6233	— 6.143	— 8.875
	21	8.7059	0.8763	1.2736	9.5984	— 7.233	— 8.863
	22	+ 8.7192	+ 0.8761	— 1.2734	— 9.8756	— 7.477	— 8.732
	23	8.7322	0.8759	1.2731	0.0433	— 7.563	— 8.342
	24	8.7448	0.8758	1.2726	0.1638	— 7.534	+ 8.204
	25	8.7571	0.8757	1.2720	0.2579	— 7.351	— 8.699
	26	8.7690	0.8757	1.2713	0.3350	— 6.660	+ 8.857
	27	+ 8.7807	+ 0.8757	— 1.2704	— 0.4003	+ 7.190	+ 8.869
	28	8.7922	0.8757	1.2694	0.4569	+ 7.523	+ 8.763
	29	8.8034	0.8758	1.2683	0.5069	+ 7.650	+ 8.477
	30	8.8144	0.8760	1.2670	0.5515	+ 7.676	— 7.602
	31	8.8252	0.8761	1.2656	— 0.5918	+ 7.620	— 8.556
Apr.	1	+ 8.8358	+ 0.8763	— 1.2641	— 0.6286	+ 7.471	— 8.763
	2	+ 8.8463	+ 0.8765	— 1.2625	— 0.6623	+ 7.143	— 8.826

APPARENT PLACES OF STARS, 1924. 217

BESSEL'S DAY NUMBERS.

Mean Midnight,	Log. A.	Log. B.	Log. C.	Log. D.	Log. A'.	Log. B'.
Apr. 2	+ 8.8463	+ 0.8765	- 1.2625	- 0.6623	+ 7.143	- 8.826
3	8.8566	0.8768	1.2607	0.6935	- 6.339	- 8.799
4	8.8666	0.8771	1.2588	0.7225	- 7.190	- 8.690
5	8.8766	0.8773	1.2567	0.7495	- 7.398	- 8.431
6	8.8864	0.8777	1.2545	0.7748	- 7.480	- 7.000
7	+ 8.8961	+ 0.8781	- 1.2522	- 0.7986	- 7.486	+ 8.398
8	8.9057	0.8785	1.2497	0.8210	- 7.415	+ 8.672
9	8.9153	0.8789	1.2471	0.8421	- 7.257	+ 8.799
10	8.9246	0.8794	1.2443	0.8622	- 6.854	+ 8.833
11	8.9339	0.8799	1.2414	0.8813	+ 6.599	+ 8.792
12	+ 8.9431	+ 0.8804	- 1.2384	- 0.8994	+ 7.161	+ 8.633
13	8.9522	0.8810	1.2352	0.9166	+ 7.307	+ 8.176
14	8.9612	0.8816	1.2318	0.9331	+ 7.298	- 8.255
15	8.9702	0.8821	1.2283	0.9488	+ 7.104	- 8.690
16	8.9791	0.8827	1.2247	0.9639	- 4.298	- 8.851
17	+ 8.9879	+ 0.8834	- 1.2209	- 0.9783	- 7.196	- 8.881
18	8.9967	0.8840	1.2169	0.9921	- 7.474	- 8.799
19	9.0053	0.8846	1.2128	1.0054	- 7.579	- 8.531
20	9.0139	0.8853	1.2085	1.0181	- 7.577	+ 7.602
21	9.0225	0.8860	1.2040	1.0304	- 7.447	+ 8.613
22	+ 9.0309	+ 0.8867	- 1.1994	- 1.0422	- 7.030	+ 8.826
23	9.0393	0.8875	1.1946	1.0535	+ 7.022	+ 8.875
24	9.0477	0.8882	1.1896	1.0645	+ 7.486	+ 8.820
25	9.0561	0.8890	1.1844	1.0750	+ 7.650	+ 8.613
26	9.0644	0.8897	1.1791	1.0851	+ 7.710	+ 7.845
27	+ 9.0726	+ 0.8905	- 1.1735	- 1.0949	+ 7.678	- 8.415
28	9.0807	0.8912	1.1678	1.1044	+ 7.570	- 8.708
29	9.0888	0.8920	1.1619	1.1135	+ 7.335	- 8.820
30	9.0968	0.8928	1.1557	1.1223	+ 6.696	- 8.820
May 1	9.1049	0.8936	1.1494	1.1308	- 6.988	- 8.748
2	+ 9.1128	+ 0.8944	- 1.1428	- 1.1390	- 7.327	- 8.556
3	9.1207	0.8952	1.1360	1.1470	- 7.447	- 8.000
4	9.1286	0.8959	1.1290	1.1546	- 7.474	+ 8.230
5	9.1364	0.8967	1.1217	1.1620	- 7.432	+ 8.613
6	9.1441	0.8974	1.1142	1.1692	- 7.298	+ 8.771
7	+ 9.1518	+ 0.8982	- 1.1064	- 1.1761	- 6.997	+ 8.833
8	9.1595	0.8990	1.0984	1.1828	+ 5.997	+ 8.813
9	9.1671	0.8997	1.0901	1.1893	+ 7.054	+ 8.708
10	9.1747	0.9005	1.0815	1.1955	+ 7.267	+ 8.380
11	9.1822	0.9012	1.0727	1.2016	+ 7.285	- 7.903
12	+ 9.1897	+ 0.9020	- 1.0635	- 1.2074	+ 7.137	- 8.602
13	9.1971	0.9027	1.0540	1.2130	+ 6.298	- 8.820
14	9.2044	0.9034	1.0441	1.2185	- 7.124	- 8.886
15	9.2117	0.9041	1.0339	1.2237	- 7.459	- 8.845
16	9.2190	0.9048	1.0234	1.2287	- 7.599	- 8.663
17	+ 9.2262	+ 0.9055	- 1.0124	- 1.2336	- 7.628	- 8.000
18	+ 9.2333	+ 0.9061	- 1.0010	- 1.2383	- 7.551	+ 8.447

218 APPARENT PLACES OF STARS, 1924.

BESSEL'S DAY NUMBERS.

Mean Midnight.		Log. A.	Log. B.	Log. C.	Log. D.	Log. A'.	Log. B'.
May	18	+ 9.2333	+ 0.9061	- 1.0010	- 1.2383	- 7.551	+ 8.447
	19	9.2404	0.9067	0.9893	1.2428	- 7.307	+ 8.771
	20	9.2475	0.9073	0.9770	1.2472	+ 5.900	+ 8.875
	21	9.2545	0.9079	0.9643	1.2514	+ 7.347	+ 8.863
	22	9.2614	0.9085	0.9511	1.2554	+ 7.601	+ 8.716
	23	+ 9.2683	+ 0.9091	- 0.9374	- 1.2592	+ 7.703	+ 8.301
	24	9.2751	0.9096	0.9231	1.2629	+ 7.710	- 8.176
	25	9.2819	0.9101	0.9082	1.2665	+ 7.640	- 8.643
	26	9.2886	0.9106	0.8926	1.2699	+ 7.474	- 8.806
	27	9.2952	0.9111	0.8764	1.2732	+ 7.118	- 8.845
	28	+ 9.3018	+ 0.9115	- 0.8593	- 1.2763	- 6.474	- 8.792
	29	9.3084	0.9120	0.8415	1.2792	- 7.201	- 8.633
	30	9.3148	0.9124	0.8228	1.2820	- 7.384	- 8.255
	31	9.3213	0.9127	0.8031	1.2847	- 7.441	+ 7.954
June	1	9.3276	0.9130	0.7824	1.2873	- 7.415	+ 8.531
	2	+ 9.3339	+ 0.9133	- 0.7605	- 1.2897	- 7.302	+ 8.732
	3	9.3402	0.9137	0.7373	1.2919	- 7.030	+ 8.820
	4	9.3464	0.9139	0.7127	1.2941	- 3.298	+ 8.826
	5	9.3525	0.9142	0.6865	1.2961	+ 7.030	+ 8.748
	6	9.3586	0.9144	0.6585	1.2980	+ 7.267	+ 8.544
	7	+ 9.3646	+ 0.9146	- 0.6285	- 1.2997	+ 7.323	+ 7.699
	8	9.3705	0.9147	0.5960	1.3013	+ 7.238	- 8.462
	9	9.3764	0.9148	0.5609	1.3028	+ 6.817	- 8.771
	10	9.3822	0.9149	0.5224	1.3042	- 6.942	- 8.881
	11	9.3880	0.9150	0.4802	1.3054	- 7.409	- 8.869
	12	+ 9.3937	+ 0.9150	- 0.4332	- 1.3065	- 7.595	- 8.748
	13	9.3993	0.9150	0.3805	1.3075	- 7.664	- 8.380
	14	9.4049	0.9149	0.3203	1.3084	- 7.635	+ 8.176
	15	9.4104	0.9148	0.2502	1.3092	- 7.491	+ 8.690
	16	9.4159	0.9147	0.1665	1.3098	- 7.046	+ 8.851
	17	+ 9.4212	+ 0.9146	- 0.0626	- 1.3103	+ 7.061	+ 8.875
	18	9.4266	0.9145	9.9257	1.3107	+ 7.502	+ 8.785
	19	9.4319	0.9143	9.7243	1.3110	+ 7.660	+ 8.491
	20	9.4371	0.9140	- 9.3371	1.3111	+ 7.708	- 7.477
	21	9.4422	0.9137	+ 8.9796	1.3111	+ 7.671	- 8.556
	22	+ 9.4473	+ 0.9134	+ 9.6108	- 1.3110	+ 7.544	- 8.785
	23	9.4524	0.9131	9.8576	1.3108	+ 7.289	- 8.845
	24	9.4573	0.9128	0.0140	1.3105	+ 6.528	- 8.813
	25	9.4622	0.9124	0.1286	1.3100	- 7.038	- 8.690
	26	9.4671	0.9120	0.2191	1.3094	- 7.311	- 8.415
	27	+ 9.4718	+ 0.9115	+ 0.2938	- 1.3087	- 7.402	- 6.000
	28	9.4766	0.9110	0.3574	1.3079	- 7.395	+ 8.415
	29	9.4812	0.9105	0.4128	1.3070	- 7.298	+ 8.681
	30	9.4858	0.9100	0.4618	1.3059	- 7.061	+ 8.799
July	1	9.4904	0.9094	0.5057	1.3047	- 5.997	+ 8.839
	2	+ 9.4949	+ 0.9088	+ 0.5455	- 1.3034	+ 6.988	+ 8.792
	3	+ 9.4993	+ 0.9081	+ 0.5818	- 1.3020	+ 7.271	+ 8.633

APPARENT PLACES OF STARS, 1924. 219

BESSEL'S DAY NUMBERS.

Mean Midnight.		Log. A.	Log. B.	Log. C.	Log. D.	Log. A'.	Log. B'.
July	3	+ 9.4993	+ 0.9081	+ 0.5818	- 1.3020	+ 7.271	+ 8.633
	4	9.5037	0.9074	0.6152	1.3004	+ 7.370	+ 8.146
	5	9.5080	0.9067	0.6461	1.2987	+ 7.335	- 8.279
	6	9.5122	0.9060	0.6749	1.2969	+ 7.124	- 8.699
	7	9.5164	0.9052	0.7017	1.2949	- 5.997	- 8.851
	8	+ 9.5205	+ 0.9044	+ 0.7269	- 1.2929	- 7.271	- 8.886
	9	9.5246	0.9036	0.7506	1.2907	- 7.541	- 8.813
	10	9.5286	0.9027	0.7730	1.2883	- 7.656	- 8.556
	11	9.5325	0.9018	0.7941	1.2858	- 7.673	+ 7.301
	12	9.5364	0.9010	0.8142	1.2832	- 7.588	+ 8.591
	13	+ 9.5403	+ 0.9000	+ 0.8332	- 1.2805	- 7.335	+ 8.820
	14	9.5441	0.8990	0.8513	1.2776	- 3.298	+ 8.881
	15	9.5478	0.8980	0.8686	1.2746	+ 7.335	+ 8.833
	16	9.5515	0.8970	0.8852	1.2714	+ 7.581	+ 8.633
	17	9.5551	0.8959	0.9010	1.2681	+ 7.675	+ 8.000
	18	+ 9.5586	+ 0.8949	+ 0.9161	- 1.2646	+ 7.667	- 8.398
	19	9.5621	0.8938	0.9306	1.2610	+ 7.575	- 8.724
	20	9.5656	0.8927	0.9445	1.2573	+ 7.374	- 8.833
	21	9.5690	0.8915	0.9579	1.2534	+ 6.911	- 8.839
	22	9.5723	0.8903	0.9708	1.2493	- 6.817	- 8.748
	23	+ 9.5756	+ 0.8892	+ 0.9831	- 1.2451	- 7.247	- 8.531
	24	9.5789	0.8880	0.9950	1.2407	- 7.374	- 7.903
	25	9.5821	0.8868	1.0065	1.2361	- 7.391	+ 8.301
	26	9.5852	0.8856	1.0176	1.2313	- 7.319	+ 8.633
	27	9.5883	0.8843	1.0283	1.2264	- 7.131	+ 8.778
	28	+ 9.5913	+ 0.8830	+ 1.0386	- 1.2213	- 6.553	+ 8.839
	29	9.5943	0.8816	1.0485	1.2161	+ 6.878	+ 8.813
	30	9.5972	0.8804	1.0581	1.2106	+ 7.252	+ 8.699
	31	9.6001	0.8791	1.0674	1.2049	+ 7.391	+ 8.398
Aug.	1	9.6030	0.8777	1.0764	1.1991	+ 7.402	- 7.845
	2	+ 9.6058	+ 0.8764	+ 1.0851	- 1.1930	+ 7.289	- 8.602
	3	9.6085	0.8750	1.0934	1.1867	+ 6.854	- 8.820
	4	9.6112	0.8737	1.1016	1.1802	- 6.979	- 8.892
	5	9.6139	0.8723	1.1094	1.1735	- 7.425	- 8.851
	6	9.6165	0.8710	1.1170	1.1666	- 7.606	- 8.672
	7	+ 9.6191	+ 0.8696	+ 1.1244	- 1.1594	- 7.662	- 8.079
	8	9.6216	0.8682	1.1315	1.1520	- 7.620	+ 8.415
	9	9.6241	0.8668	1.1384	1.1443	- 7.453	+ 8.763
	10	9.6265	0.8654	1.1450	1.1363	- 6.932	+ 8.881
	11	9.6289	0.8640	1.1514	1.1281	+ 7.111	+ 8.863
	12	+ 9.6313	+ 0.8626	+ 1.1577	- 1.1196	+ 7.491	+ 8.732
	13	9.6336	0.8612	1.1637	1.1108	+ 7.624	+ 8.342
	14	9.6358	0.8598	1.1695	1.1016	+ 7.648	- 8.146
	15	9.6381	0.8584	1.1751	1.0922	+ 7.584	- 8.663
	16	9.6403	0.8570	1.1806	1.0824	+ 7.412	- 8.820
	17	+ 9.6424	+ 0.8556	+ 1.1858	- 1.0722	+ 7.014	- 8.845
	18	+ 9.6446	+ 0.8543	+ 1.1909	- 1.0617	- 6.660	- 8.785

20 APPARENT PLACES OF STARS, 1924.

BESSEL'S DAY NUMBERS.

Mean Midnight.	Log. A.	Log. B.	Log. C.	Log. D.	Log. A'.	Log. B'.
Aug. 18	+ 9.6446	+ 0.8543	+ 1.1909	- 1.0617	- 6.660	- 8.785
19	9.6467	0.8530	1.1957	1.0508	- 7.207	- 8.613
20	9.6487	0.8516	1.2004	1.0395	- 7.366	- 8.176
21	9.6507	0.8503	1.2050	1.0278	- 7.405	+ 8.079
22	9.6527	0.8489	1.2094	1.0156	- 7.355	+ 8.568
23	+ 9.6547	+ 0.8476	+ 1.2136	- 1.0029	- 7.212	+ 8.748
24	9.6566	0.8464	1.2176	0.9897	- 6.830	+ 8.826
25	9.6585	0.8451	1.2215	0.9759	+ 6.620	+ 8.826
26	9.6604	0.8439	1.2253	0.9616	+ 7.173	+ 8.748
27	9.6622	0.8426	1.2288	0.9466	+ 7.355	+ 8.531
28	+ 9.6640	+ 0.8414	+ 1.2322	- 0.9310	+ 7.415	+ 7.477
29	9.6658	0.8401	1.2355	0.9147	+ 7.355	- 8.477
30	9.6675	0.8389	1.2387	0.8976	+ 7.111	- 8.763
31	9.6693	0.8378	1.2417	0.8796	- 6.339	- 8.875
Sept. 1	9.6710	0.8367	1.2445	0.8607	- 7.280	- 8.875
2	+ 9.6726	+ 0.8357	+ 1.2472	- 0.8408	- 7.528	- 8.763
3	9.6743	0.8346	1.2498	0.8199	- 7.626	- 8.415
4	9.6759	0.8335	1.2523	0.7977	- 7.620	+ 8.114
5	9.6775	0.8325	1.2546	0.7742	- 7.499	+ 8.690
6	9.6791	0.8315	1.2567	0.7492	- 7.143	+ 8.857
7	+ 9.6807	+ 0.8305	+ 1.2587	- 0.7225	+ 6.817	+ 8.886
8	9.6823	0.8296	1.2606	0.6939	+ 7.422	+ 8.799
9	9.6838	0.8287	1.2624	0.6632	+ 7.601	+ 8.531
10	9.6853	0.8279	1.2640	0.6299	+ 7.646	- 7.301
11	9.6868	0.8270	1.2656	0.5937	+ 7.603	- 8.556
12	+ 9.6883	+ 0.8262	+ 1.2670	- 0.5541	+ 7.459	- 8.778
13	9.6898	0.8255	1.2682	0.5104	+ 7.137	- 8.851
14	9.6912	0.8248	1.2693	0.4616	- 6.298	- 8.820
15	9.6927	0.8241	1.2703	0.4064	- 7.173	- 8.699
16	9.6941	0.8234	1.2712	0.3430	- 7.366	- 8.415
17	+ 9.6956	+ 0.8228	+ 1.2719	- 0.2685	- 7.428	+ 7.301
18	9.6970	0.8222	1.2725	0.1784	- 7.402	+ 8.462
19	9.6984	0.8217	1.2730	0.0643	- 7.285	+ 8.708
20	9.6998	0.8213	1.2733	9.9089	- 7.022	+ 8.806
21	9.7012	0.8209	1.2736	9.6642	- 3.298	+ 8.826
22	+ 9.7026	+ 0.8205	+ 1.2737	- 9.0481	+ 7.022	+ 8.785
23	9.7040	0.8201	1.2737	+ 9.3766	+ 7.285	+ 8.613
24	9.7054	0.8198	1.2735	9.7694	+ 7.381	+ 8.079
25	9.7067	0.8196	1.2732	9.9722	+ 7.355	- 8.301
26	9.7081	0.8194	1.2728	0.1098	+ 7.173	- 8.699
27	+ 9.7095	+ 0.8192	+ 1.2723	+ 0.2142	+ 6.377	- 8.851
28	9.7109	0.8190	1.2716	0.2982	- 7.143	- 8.892
29	9.7122	0.8189	1.2708	0.3685	- 7.465	- 8.820
30	9.7136	0.8189	1.2699	0.4289	- 7.597	- 8.591
Oct. 1	9.7150	0.8189	1.2689	0.4818	- 7.614	- 7.000
2	+ 9.7164	+ 0.8189	+ 1.2677	+ 0.5289	- 7.528	+ 8.580
3	+ 9.7178	+ 0.8190	+ 1.2664	+ 0.5713	- 7.252	+ 8.820

APPARENT PLACES OF STARS, 1924. 221

BESSEL'S DAY NUMBERS.

Mean Midnight.	Log. A.	Log. B.	Log. C.	Log. D.	Log. A'.	Log. B'.
Oct. 3	+ 9.7178	+ 0.8190	+ 1.2664	+ 0.5713	- 7.252	+ 8.820
4	9.7192	0.8191	1.2649	0.6098	+ 6.444	+ 8.892
5	9.7206	0.8192	1.2633	0.6451	+ 7.363	+ 8.845
6	9.7220	0.8194	1.2616	0.6776	+ 7.590	+ 8.663
7	9.7234	0.8196	1.2598	0.7078	+ 7.667	+ 8.041
8	+ 9.7249	+ 0.8199	+ 1.2578	+ 0.7359	+ 7.648	- 8.398
9	9.7263	0.8203	1.2556	0.7622	+ 7.536	- 8.732
10	9.7277	0.8206	1.2533	0.7869	+ 7.294	- 8.845
11	9.7292	0.8210	1.2509	0.8101	+ 6.528	- 8.845
12	9.7307	0.8214	1.2483	0.8321	- 7.054	- 8.756
13	+ 9.7321	+ 0.8218	+ 1.2456	+ 0.8529	- 7.335	- 8.531
14	9.7336	0.8223	1.2428	0.8726	- 7.425	- 7.778
15	9.7351	0.8229	1.2398	0.8913	- 7.425	+ 8.322
16	9.7366	0.8234	1.2366	0.9092	- 7.335	+ 8.653
17	9.7381	0.8240	1.2333	0.9262	- 7.131	+ 8.792
18	+ 9.7397	+ 0.8246	+ 1.2298	+ 0.9425	- 6.553	+ 8.839
19	9.7412	0.8252	1.2261	0.9581	+ 6.803	+ 8.806
20	9.7428	0.8258	1.2223	0.9730	+ 7.201	+ 8.681
21	9.7444	0.8265	1.2183	0.9873	+ 7.331	+ 8.362
22	9.7460	0.8272	1.2142	1.0010	+ 7.339	- 7.845
23	+ 9.7476	+ 0.8279	+ 1.2098	+ 1.0142	+ 7.201	- 8.602
24	9.7492	0.8287	1.2053	1.0268	+ 6.599	- 8.820
25	9.7508	0.8294	1.2006	1.0390	- 7.061	- 8.898
26	9.7525	0.8302	1.1958	1.0508	- 7.438	- 8.863
27	9.7542	0.8311	1.1907	1.0621	- 7.593	- 8.699
28	+ 9.7558	+ 0.8319	+ 1.1854	+ 1.0730	- 7.637	- 8.176
29	9.7575	0.8327	1.1800	1.0835	- 7.584	+ 8.398
30	9.7593	0.8336	1.1743	1.0936	- 7.384	+ 8.763
31	9.7610	0.8344	1.1684	1.1034	- 6.553	+ 8.881
Nov. 1	9.7628	0.8353	1.1623	1.1128	+ 7.271	+ 8.881
2	+ 9.7645	+ 0.8361	+ 1.1560	+ 1.1219	+ 7.570	+ 8.748
3	9.7663	0.8370	1.1494	1.1307	+ 7.680	+ 8.362
4	9.7681	0.8378	1.1426	1.1392	+ 7.693	- 8.146
5	9.7700	0.8387	1.1356	1.1474	+ 7.620	- 8.663
6	9.7718	0.8396	1.1283	1.1554	+ 7.438	- 8.826
7	+ 9.7736	+ 0.8405	+ 1.1207	+ 1.1630	+ 7.030	- 8.857
8	9.7755	0.8414	1.1129	1.1704	- 6.745	- 8.799
9	9.7774	0.8422	1.1048	1.1776	- 7.257	- 8.623
10	9.7793	0.8431	1.0963	1.1845	- 7.395	- 8.176
11	9.7812	0.8439	1.0876	1.1912	- 7.422	+ 8.079
12	+ 9.7831	+ 0.8448	+ 1.0786	+ 1.1976	- 7.359	+ 8.568
13	9.7851	0.8456	1.0692	1.2038	- 7.196	+ 8.763
14	9.7870	0.8464	1.0595	1.2098	- 6.803	+ 8.833
15	9.7890	0.8472	1.0494	1.2156	+ 6.640	+ 8.826
16	9.7910	0.8480	1.0389	1.2212	+ 7.137	+ 8.732
17	+ 9.7930	+ 0.8488	+ 1.0280	+ 1.2265	+ 7.302	+ 8.505
18	+ 9.7950	+ 0.8496	+ 1.0167	+ 1.2317	+ 7.339	+ 7.301

222 APPARENT PLACES OF STARS, 1924.

BESSEL'S DAY NUMBERS.

Mean Midnight.	Log. A.	Log. B.	Log. C.	Log. D.	Log. A'.	Log. B'.
Nov. 18	+ 9.7950	+ 0.8496	+ 1.0167	+ 1.2317	+ 7.339	+ 7.301
19	9.7970	0.8503	1.0050	1.2367	+ 7.238	- 8.491
20	9.7990	0.8511	0.9928	1.2415	+ 6.817	- 8.771
21	9.8011	0.8518	0.9801	1.2461	- 6.942	- 8.881
22	9.8031	0.8525	0.9668	1.2506	- 7.409	- 8.886
23	+ 9.8052	+ 0.8531	+ 0.9530	+ 1.2548	- 7.597	- 8.771
24	9.8073	0.8537	0.9386	1.2589	- 7.673	- 8.431
25	9.8093	0.8544	0.9236	1.2628	- 7.652	+ 8.041
26	9.8114	0.8549	0.9079	1.2666	- 7.521	+ 8.681
27	9.8135	0.8555	0.8914	1.2701	- 7.131	+ 8.857
28	+ 9.8156	+ 0.8560	+ 0.8742	+ 1.2736	+ 6.970	+ 8.892
29	9.8177	0.8566	0.8561	1.2768	+ 7.488	+ 8.813
30	9.8198	0.8570	0.8370	1.2799	+ 7.667	+ 8.556
Dec. 1	9.8220	0.8574	0.8169	1.2829	+ 7.708	- 7.000
2	9.8241	0.8578	0.7957	1.2857	+ 7.671	- 8.556
3	+ 9.8262	+ 0.8582	+ 0.7733	+ 1.2883	+ 7.546	- 8.792
4	9.8283	0.8585	0.7495	1.2908	+ 7.276	- 8.863
5	9.8305	0.8588	0.7241	1.2931	+ 6.298	- 8.833
6	9.8326	0.8591	0.6971	1.2953	- 7.076	- 8.699
7	9.8347	0.8594	0.6680	1.2973	- 7.319	- 8.398
8	+ 9.8368	+ 0.8596	+ 0.6367	+ 1.2992	- 7.384	+ 7.602
9	9.8390	0.8597	0.6029	1.3010	- 7.355	+ 8.505
10	9.8411	0.8598	0.5661	1.3026	- 7.212	+ 8.724
11	9.8432	0.8599	0.5256	1.3041	- 6.854	+ 8.820
12	9.8453	0.8599	0.4808	1.3054	+ 6.444	+ 8.833
13	+ 9.8475	+ 0.8598	+ 0.4307	+ 1.3066	+ 7.104	+ 8.771
14	9.8496	0.8598	0.3739	1.3077	+ 7.311	+ 8.602
15	9.8517	0.8597	0.3084	1.3086	+ 7.374	+ 8.079
16	9.8538	0.8596	0.2310	1.3093	+ 7.315	- 8.301
17	9.8559	0.8594	0.1366	1.3100	+ 7.046	- 8.708
18	+ 9.8580	+ 0.8591	+ 0.0155	+ 1.3105	- 6.528	- 8.863
19	9.8600	0.8589	9.8470	1.3108	- 7.319	- 8.898
20	9.8621	0.8586	9.5676	1.3110	- 7.579	- 8.826
21	9.8642	0.8583	+ 8.5539	1.3111	- 7.691	- 8.602
22	9.8662	0.8579	- 9.4742	1.3111	- 7.701	- 7.477
23	+ 9.8683	+ 0.8575	- 9.8005	+ 1.3109	- 7.624	+ 8.568
24	9.8703	0.8570	9.9847	1.3106	- 7.398	+ 8.820
25	9.8723	0.8565	0.1134	1.3101	- 6.377	+ 8.898
26	9.8743	0.8559	0.2126	1.3095	+ 7.315	+ 8.851
27	9.8763	0.8553	0.2931	1.3087	+ 7.586	+ 8.672
28	+ 9.8783	+ 0.8547	- 0.3609	+ 1.3078	+ 7.685	+ 8.079
29	9.8803	0.8539	0.4194	1.3068	+ 7.685	- 8.380
30	9.8823	0.8532	0.4709	1.3057	+ 7.599	- 8.732
31	9.8842	0.8524	0.5168	1.3044	+ 7.405	- 8.857
32	+ 9.8861	+ 0.8516	- 0.5581	+ 1.3029	+ 6.961	- 8.851

APPARENT PLACES OF STARS, 1924. 223

QUANTITIES FOR CORRECTING THE PLACES OF STARS.

Mean Midnight.	<i>f</i>	Log. <i>g</i>	<i>G</i>	Log. <i>h</i>	<i>H</i>	Log. <i>i</i>	<i>f'</i>	Log. <i>g'</i>	<i>G'</i>
Jan.	^s 1 -0.423	0.9708	107 11	1.3100	350 30	-0.1646	^s -0.13	8.943	192
	2 0.412	0.9694	106 48	1.3098	349 34	0.2049	-0.12	8.911	167
	3 0.402	0.9680	106 25	1.3096	348 38	0.2417	-0.08	8.878	136
	4 0.392	0.9666	106 3	1.3093	347 41	0.2755	-0.02	8.862	103
	5 0.382	0.9652	105 41	1.3090	346 44	0.3067	+0.04	8.889	70
	6 -0.372	0.9638	105 18	1.3087	345 48	-0.3357	+0.10	8.934	42
	7 0.362	0.9623	104 56	1.3084	344 51	0.3628	+0.13	8.967	18
	8 0.352	0.9608	104 34	1.3080	343 54	0.3882	+0.14	8.981	357
	9 0.342	0.9593	104 12	1.3076	342 57	0.4120	+0.13	8.968	339
	10 0.332	0.9578	103 50	1.3072	342 0	0.4344	+0.10	8.929	319
	11 -0.322	0.9563	103 27	1.3068	341 3	-0.4556	+0.05	8.879	298
	12 0.312	0.9548	103 5	1.3064	340 6	0.4757	+0.01	8.800	273
	13 0.303	0.9532	102 43	1.3060	339 8	0.4948	-0.04	8.746	244
	14 0.293	0.9517	102 21	1.3056	338 11	0.5129	-0.07	8.731	213
	15 0.284	0.9502	102 0	1.3051	337 13	0.5302	-0.09	8.756	184
	16 -0.274	0.9487	101 38	1.3046	336 16	-0.5467	-0.09	8.796	160
	17 0.265	0.9471	101 17	1.3041	335 18	0.5624	-0.08	8.830	138
	18 0.256	0.9456	100 55	1.3036	334 20	0.5775	-0.05	8.847	120
	19 0.247	0.9440	100 34	1.3031	333 22	0.5919	-0.02	8.839	100
	20 0.238	0.9424	100 12	1.3026	332 24	0.6057	+0.02	8.810	77
	21 -0.229	0.9408	99 51	1.3020	331 25	-0.6190	+0.06	8.761	51
	22 0.220	0.9393	99 29	1.3014	330 27	0.6317	+0.08	8.715	18
	23 0.211	0.9378	99 8	1.3008	329 28	0.6440	+0.08	8.718	340
	24 0.202	0.9362	98 47	1.3002	328 29	0.6557	+0.05	8.781	304
	25 0.193	0.9346	98 26	1.2996	327 30	0.6670	+0.01	8.853	275
	26 -0.185	0.9331	98 5	1.2990	326 31	-0.6779	-0.04	8.903	250
	27 0.176	0.9315	97 44	1.2984	325 32	0.6884	-0.09	8.930	227
	28 0.168	0.9300	97 24	1.2978	324 33	0.6985	-0.12	8.930	203
	29 0.160	0.9284	97 4	1.2972	323 33	0.7083	-0.12	8.909	176
	30 0.152	0.9269	96 43	1.2966	322 33	0.7177	-0.10	8.876	148
Feb.	31 -0.144	0.9253	96 23	1.2959	321 34	-0.7267	-0.05	8.858	116
	1 0.136	0.9238	96 3	1.2953	320 34	0.7354	+0.01	8.878	83
	2 0.128	0.9223	95 43	1.2946	319 33	0.7439	+0.07	8.908	53
	3 0.120	0.9208	95 23	1.2940	318 33	0.7520	+0.12	8.941	27
	4 0.112	0.9193	95 3	1.2933	317 33	0.7598	+0.14	8.959	4
	5 -0.104	0.9178	94 43	1.2927	316 32	-0.7674	+0.13	8.956	343
	6 0.097	0.9164	94 24	1.2920	315 31	0.7747	+0.11	8.935	323
	7 0.089	0.9149	94 4	1.2913	314 30	0.7817	+0.06	8.885	302
	8 0.082	0.9135	93 45	1.2907	313 29	0.7885	+0.02	8.825	279
	9 0.075	0.9121	93 26	1.2900	312 28	0.7951	-0.03	8.765	251
	10 -0.068	0.9107	93 7	1.2893	311 26	-0.8014	-0.06	8.742	221
	11 0.061	0.9093	92 48	1.2887	310 24	0.8075	-0.09	8.759	192
	12 0.054	0.9079	92 29	1.2880	309 22	0.8134	-0.09	8.799	167
	13 0.048	0.9066	92 11	1.2874	308 20	0.8191	-0.09	8.831	146
	14 0.041	0.9053	91 53	1.2867	307 18	0.8245	-0.06	8.849	126
	15 -0.035	0.9040	91 35	1.2861	306 16	-0.8298	-0.03	8.852	107
	16 -0.028	0.9027	91 17	1.2854	305 14	-0.8348	+0.01	8.821	87

224 APPARENT PLACES OF STARS, 1924.

QUANTITIES FOR CORRECTING THE PLACES OF STARS.

Mean Midnight.	<i>f</i>	Log. <i>g</i>	<i>G</i>	Log. <i>h</i>	<i>H</i>	Log. <i>i</i>	<i>f'</i>	Log. <i>g'</i>	<i>G'</i>
Feb. 16	^s -0.028	0.9027	91 ^o 17 [']	1.2854	305 ^o 14 [']	-0.8348	^s +0.001	8.821	87 ^o
17	0.022	0.9015	90 59	1.2848	304 11	0.8397	+0.004	8.772	62
18	0.015	0.9003	90 41	1.2842	303 8	0.8443	+0.007	8.719	30
19	0.009	0.8991	90 24	1.2836	302 5	0.8488	+0.008	8.709	351
20	-0.002	0.8979	90 6	1.2831	301 2	0.8531	+0.006	8.767	315
21	+0.004	0.8968	89 49	1.2825	299 59	-0.8573	+0.003	8.844	286
22	0.010	0.8957	89 32	1.2819	298 55	0.8612	-0.002	8.891	261
23	0.016	0.8947	89 15	1.2814	297 52	0.8650	-0.007	8.919	237
24	0.022	0.8937	88 58	1.2808	296 48	0.8686	-0.010	8.912	213
25	0.028	0.8927	88 41	1.2803	295 44	0.8721	-0.012	8.886	187
26	+0.033	0.8917	88 24	1.2798	294 40	-0.8754	-0.010	8.854	157
27	0.039	0.8907	88 7	1.2793	293 36	0.8785	-0.006	8.841	123
28	0.044	0.8898	87 51	1.2788	292 32	0.8815	0.000	8.869	90
29	0.050	0.8889	87 35	1.2783	291 28	0.8843	+0.006	8.904	61
Mar. 1	0.055	0.8881	87 19	1.2779	290 24	0.8870	+0.011	8.938	35
2	+0.061	0.8873	87 3	1.2775	289 20	-0.8895	+0.014	8.956	12
3	0.066	0.8865	86 47	1.2771	288 16	0.8919	+0.014	8.957	351
4	0.072	0.8858	86 31	1.2767	287 11	0.8941	+0.011	8.936	330
5	0.077	0.8851	86 16	1.2764	286 6	0.8962	+0.007	8.889	308
6	0.082	0.8845	86 0	1.2761	285 2	0.8981	+0.003	8.834	285
7	+0.087	0.8839	85 45	1.2758	283 57	-0.8999	-0.002	8.782	257
8	0.092	0.8834	85 29	1.2755	282 52	0.9016	-0.006	8.750	228
9	0.097	0.8829	85 14	1.2752	281 47	0.9031	-0.008	8.762	199
10	0.102	0.8824	84 59	1.2749	280 42	0.9045	-0.010	8.800	173
11	0.107	0.8820	84 44	1.2747	279 37	0.9057	-0.009	8.836	152
12	+0.112	0.8816	84 29	1.2745	278 32	-0.9068	-0.007	8.855	132
13	0.117	0.8812	84 14	1.2743	277 27	0.9078	-0.005	8.866	114
14	0.122	0.8809	83 59	1.2741	276 22	0.9086	-0.001	8.835	96
15	0.127	0.8807	83 44	1.2739	275 17	0.9093	+0.003	8.780	74
16	0.132	0.8805	83 30	1.2738	274 12	0.9099	+0.006	8.710	44
17	+0.137	0.8804	83 15	1.2737	273 7	-0.9103	+0.007	8.667	5
18	0.142	0.8803	83 1	1.2737	272 2	0.9106	+0.006	8.714	325
19	0.147	0.8802	82 46	1.2736	270 57	0.9108	+0.004	8.800	293
20	0.151	0.8802	82 32	1.2736	269 52	0.9109	0.000	8.875	268
21	0.156	0.8802	82 17	1.2737	268 47	0.9108	-0.005	8.906	245
22	+0.161	0.8803	82 3	1.2737	267 42	-0.9106	-0.009	8.908	222
23	0.166	0.8804	81 49	1.2738	266 37	0.9103	-0.011	8.884	197
24	0.171	0.8805	81 34	1.2739	265 32	0.9098	-0.011	8.848	167
25	0.176	0.8807	81 20	1.2740	264 28	0.9092	-0.007	8.828	132
26	0.180	0.8810	81 5	1.2741	263 23	0.9085	-0.001	8.860	97
27	+0.185	0.8813	80 51	1.2743	262 19	-0.9076	+0.005	8.904	67
28	0.190	0.8816	80 36	1.2745	261 14	0.9066	+0.010	8.947	41
29	0.195	0.8820	80 22	1.2747	260 10	0.9055	+0.014	8.975	19
30	0.200	0.8824	80 8	1.2749	259 6	0.9042	+0.015	8.978	358
31	0.205	0.8829	79 53	1.2752	258 2	0.9028	+0.013	8.959	337
Apr. 1	+0.210	0.8834	79 39	1.2755	256 58	-0.9013	+0.009	8.918	316
2	+0.216	0.8840	79 25	1.2758	255 54	-0.8997	+0.004	8.861	293

APPARENT PLACES OF STARS, 1924. 225

QUANTITIES FOR CORRECTING THE PLACES OF STARS.

Mean Midnight.	<i>f</i>	Log. <i>g</i>	<i>G</i>	Log. <i>h</i>	<i>H</i>	Log. <i>i</i>	<i>f'</i>	Log. <i>g'</i>	<i>G'</i>
Apr. 2	+0.216	0.8840	79 25	1.2758	255 54	-0.8997	+0.004	8.861	293
3	0.221	0.8846	79 10	1.2761	254 50	0.8979	-0.001	8.800	266
4	0.225	0.8852	78 56	1.2764	253 47	0.8960	-0.005	8.763	238
5	0.232	0.8859	78 41	1.2767	252 44	0.8939	-0.008	8.756	208
6	0.237	0.8866	78 27	1.2771	251 40	0.8917	-0.009	8.782	181
7	+0.242	0.8874	78 12	1.2775	250 37	-0.8894	-0.009	8.821	158
8	0.247	0.8882	77 58	1.2779	249 34	0.8869	-0.008	8.846	138
9	0.253	0.8890	77 43	1.2783	248 31	0.8843	-0.006	8.861	120
10	0.258	0.8899	77 28	1.2788	247 28	0.8815	-0.002	8.842	102
11	0.264	0.8908	77 13	1.2792	246 25	0.8786	+0.001	8.796	83
12	+0.269	0.8918	76 58	1.2797	245 23	-0.8756	+0.004	8.715	56
13	0.275	0.8928	76 43	1.2802	244 21	0.8724	+0.006	8.637	20
14	0.281	0.8938	76 28	1.2807	243 19	0.8690	+0.006	8.640	336
15	0.287	0.8949	76 13	1.2812	242 17	0.8655	+0.004	8.742	297
16	0.293	0.8960	75 57	1.2818	241 15	0.8619	0.000	8.851	270
17	+0.299	0.8971	75 42	1.2823	240 13	-0.8581	-0.005	8.915	248
18	0.305	0.8982	75 26	1.2829	239 12	0.8541	-0.009	8.938	227
19	0.311	0.8994	75 11	1.2834	238 11	0.8500	-0.012	8.921	204
20	0.317	0.9006	74 55	1.2840	237 10	0.8457	-0.012	8.880	177
21	0.323	0.9018	74 40	1.2846	236 9	0.8412	-0.009	8.842	144
22	+0.330	0.9030	74 24	1.2852	235 9	-0.8366	-0.003	8.847	108
23	0.336	0.9043	74 8	1.2858	234 9	0.8318	+0.003	8.891	74
24	0.343	0.9056	73 52	1.2864	233 9	0.8268	+0.009	8.955	47
25	0.349	0.9070	73 36	1.2871	232 9	0.8216	+0.014	8.993	25
26	0.356	0.9084	73 19	1.2877	231 9	0.8163	+0.016	9.013	4
27	+0.363	0.9098	73 3	1.2883	230 10	-0.8107	+0.015	8.995	345
28	0.370	0.9112	72 46	1.2890	229 10	0.8050	+0.011	8.956	326
29	0.377	0.9126	72 30	1.2896	228 11	0.7991	+0.007	8.898	303
30	0.384	0.9140	72 13	1.2902	227 12	0.7929	+0.002	8.825	279
May 1	0.391	0.9155	71 57	1.2909	226 13	0.7866	-0.003	8.773	251
2	+0.398	0.9170	71 40	1.2915	225 15	-0.7800	-0.007	8.746	220
3	0.405	0.9185	71 23	1.2921	224 17	0.7732	-0.009	8.756	190
4	0.413	0.9200	71 6	1.2927	223 19	0.7662	-0.009	8.793	164
5	0.420	0.9215	70 49	1.2934	222 21	0.7589	-0.008	8.832	143
6	0.428	0.9230	70 32	1.2940	221 23	0.7514	-0.006	8.852	124
7	+0.436	0.9246	70 14	1.2946	220 25	-0.7436	-0.003	8.851	106
8	0.444	0.9262	69 56	1.2952	219 28	0.7356	0.000	8.813	88
9	0.452	0.9278	69 39	1.2958	218 31	0.7273	+0.004	8.747	66
10	0.460	0.9294	69 21	1.2964	217 34	0.7187	+0.006	8.645	33
11	0.468	0.9310	69 3	1.2971	216 37	0.7099	+0.006	8.596	348
12	+0.476	0.9326	68 45	1.2977	215 41	-0.7007	+0.004	8.686	305
13	0.484	0.9342	68 27	1.2983	214 44	0.6912	+0.001	8.821	273
14	0.492	0.9358	68 9	1.2989	213 48	0.6813	-0.004	8.911	251
15	0.500	0.9374	67 51	1.2995	212 52	0.6711	-0.009	8.957	230
16	0.509	0.9390	67 33	1.3000	211 56	0.6606	-0.012	8.964	210
17	+0.517	0.9406	67 15	1.3006	211 0	-0.6496	-0.013	8.933	187
18	+0.526	0.9422	66 57	1.3011	210 4	-0.6382	-0.011	8.884	159

226 APPARENT PLACES OF STARS, 1924.

QUANTITIES FOR CORRECTING THE PLACES OF STARS.

Mean Midnight.	<i>f</i>	Log. <i>g</i>	<i>G</i>	Log. <i>h</i>	<i>H</i>	Log. <i>i</i>	<i>f'</i>	Log. <i>g'</i>	<i>G'</i>
May 18	⁸ +0.526	0.9422	66 57	1.3011	210 4	-0.6382	⁸ -0.011	8.884	159
19	0.534	0.9438	66 38	1.3017	209 9	0.6265	-0.006	8.855	125
20	0.543	0.9455	66 19	1.3022	208 14	0.6142	0.000	8.875	89
21	0.552	0.9471	66 1	1.3027	207 19	0.6015	+0.007	8.932	59
22	0.561	0.9488	65 42	1.3032	206 24	0.5883	+0.012	8.980	33
23	+0.570	0.9504	65 23	1.3037	205 29	-0.5746	+0.015	9.013	11
24	0.579	0.9521	65 4	1.3041	204 34	0.5603	+0.016	9.013	352
25	0.588	0.9537	64 45	1.3045	203 40	0.5454	+0.013	8.991	333
26	0.597	0.9554	64 26	1.3050	202 45	0.5298	+0.009	8.942	313
27	0.606	0.9570	64 7	1.3055	201 51	0.5136	+0.004	8.874	291
28	+0.616	0.9586	63 47	1.3060	200 57	-0.4965	-0.001	8.794	265
29	0.625	0.9602	63 28	1.3064	200 3	0.4787	-0.005	8.728	233
30	0.634	0.9618	63 8	1.3068	199 9	0.4600	-0.007	8.714	200
31	0.644	0.9635	62 49	1.3072	198 15	0.4403	-0.009	8.749	171
June 1	0.653	0.9651	62 30	1.3076	197 22	0.4196	-0.008	8.794	147
2	+0.663	0.9667	62 11	1.3079	196 28	-0.3977	-0.006	8.828	127
3	0.672	0.9683	61 51	1.3082	195 35	0.3745	-0.003	8.842	108
4	0.682	0.9699	61 32	1.3085	194 41	0.3499	0.000	8.826	90
5	0.692	0.9715	61 12	1.3088	193 48	0.3237	+0.003	8.778	69
6	0.702	0.9731	60 53	1.3091	192 55	0.2957	+0.006	8.708	43
7	+0.712	0.9747	60 33	1.3094	192 2	-0.2657	+0.006	8.628	7
8	0.721	0.9763	60 13	1.3096	191 9	0.2332	+0.005	8.655	320
9	0.731	0.9778	59 53	1.3098	190 16	0.1981	+0.002	8.782	283
10	0.741	0.9794	59 34	1.3100	189 23	0.1596	-0.003	8.892	257
11	0.751	0.9809	59 14	1.3102	188 30	0.1174	-0.008	8.954	235
12	+0.761	0.9824	58 54	1.3104	187 37	-0.0704	-0.012	8.986	215
13	0.771	0.9839	58 34	1.3105	186 45	0.0177	-0.014	8.980	195
14	0.781	0.9854	58 14	1.3107	185 52	9.9575	-0.013	8.943	170
15	0.791	0.9869	57 54	1.3108	184 59	9.8874	-0.010	8.898	142
16	0.800	0.9884	57 34	1.3109	184 7	9.8037	-0.003	8.871	107
17	+0.810	0.9899	57 14	1.3110	183 14	-9.6998	+0.004	8.895	73
18	0.820	0.9913	56 54	1.3110	182 22	9.5629	+0.010	8.945	44
19	0.830	0.9928	56 34	1.3111	181 29	9.3615	+0.014	8.986	19
20	0.841	0.9942	56 14	1.3111	180 37	-8.9743	+0.016	9.010	358
21	0.851	0.9956	55 54	1.3111	179 44	+8.6168	+0.014	9.003	339
22	+0.861	0.9970	55 34	1.3111	178 52	+9.2480	+0.011	8.968	319
23	0.871	0.9984	55 15	1.3110	177 59	9.4948	+0.006	8.904	299
24	0.881	0.9998	54 55	1.3110	177 7	9.6512	+0.001	8.815	276
25	0.891	1.0012	54 35	1.3109	176 14	9.7658	-0.003	8.729	246
26	0.901	1.0026	54 16	1.3108	175 22	9.8563	-0.006	8.687	212
27	+0.911	1.0039	53 56	1.3107	174 29	+9.9310	-0.008	8.704	180
28	0.920	1.0052	53 37	1.3106	173 37	9.9946	-0.008	8.749	152
29	0.930	1.0065	53 17	1.3105	172 44	0.0500	-0.006	8.795	130
30	0.940	1.0078	52 57	1.3103	171 52	0.0990	-0.004	8.826	110
July 1	0.950	1.0091	52 38	1.3101	170 59	0.1429	0.000	8.839	92
2	+0.960	1.0104	52 18	1.3099	170 6	+0.1827	+0.003	8.812	73
3	+0.970	1.0117	51 58	1.3097	169 13	+0.2190	+0.006	8.755	49

APPARENT PLACES OF STARS, 1924. 227

QUANTITIES FOR CORRECTING THE PLACES OF STARS.

Mean Midnight.	<i>f</i>	Log. <i>g</i>	<i>G</i>	Log. <i>h</i>	<i>H</i>	Log. <i>i</i>	<i>f'</i>	Log. <i>g'</i>	<i>G'</i>
July 3	⁸ +0.970	1.0117	51° 58'	1.3097	169° 13'	+0.2190	⁸ +0.006	8.755	49°
4	0.980	1.0130	51 39	1.3095	168 20	0.2524	+0.007	8.691	17
5	0.990	1.0142	51 19	1.3092	167 27	0.2833	+0.007	8.675	336
6	0.999	1.0154	51 0	1.3089	166 34	0.3121	+0.004	8.753	298
7	1.009	1.0166	50 41	1.3086	165 41	0.3389	.000	8.851	268
8	+1.018	1.0178	50 22	1.3083	164 48	+0.3641	-.006	8.932	244
9	1.028	1.0190	50 3	1.3080	163 55	0.3878	-.011	8.979	223
10	1.037	1.0202	49 44	1.3077	163 2	0.4102	-.014	8.990	202
11	1.047	1.0213	49 25	1.3073	162 8	0.4313	-.014	8.975	181
12	1.056	1.0224	49 6	1.3069	161 15	0.4514	-.012	8.939	153
13	+1.066	1.0235	48 47	1.3065	160 21	+0.4704	-.007	8.898	123
14	1.075	1.0246	48 28	1.3061	159 28	0.4885	.000	8.881	90
15	1.085	1.0257	48 10	1.3057	158 34	0.5058	+0.007	8.907	58
16	1.094	1.0268	47 51	1.3053	157 40	0.5224	+0.012	8.943	29
17	1.103	1.0279	47 33	1.3048	156 46	0.5382	+0.015	8.979	6
18	+1.112	1.0290	47 15	1.3044	155 52	+0.5533	+0.014	8.984	345
19	1.121	1.0300	46 57	1.3039	154 57	0.5678	+0.012	8.964	325
20	1.130	1.0310	46 39	1.3034	154 3	0.5817	+0.007	8.919	305
21	1.139	1.0320	46 21	1.3029	153 8	0.5951	+0.003	8.851	283
22	1.148	1.0330	46 3	1.3024	152 14	0.6080	-.002	8.760	257
23	+1.156	1.0340	45 46	1.3019	151 19	+0.6203	-.005	8.691	224
24	1.165	1.0350	45 28	1.3014	150 24	0.6322	-.007	8.682	190
25	1.173	1.0360	45 10	1.3008	149 29	0.6437	-.008	8.726	158
26	1.182	1.0369	44 53	1.3003	148 34	0.6548	-.006	8.777	134
27	1.191	1.0378	44 36	1.2997	147 38	0.6655	-.004	8.818	114
28	+1.199	1.0387	44 19	1.2992	146 43	+0.6758	-.001	8.841	96
29	1.207	1.0396	44 2	1.2986	145 47	0.6857	+0.002	8.824	77
30	1.216	1.0405	43 45	1.2980	144 51	0.6953	+0.006	8.789	54
31	1.224	1.0414	43 29	1.2974	143 55	0.7046	+0.008	8.743	27
Aug. 1	1.232	1.0423	43 12	1.2968	142 59	0.7136	+0.008	8.708	352
2	+1.240	1.0432	42 56	1.2962	142 3	+0.7223	+0.006	8.747	314
3	1.248	1.0441	42 40	1.2956	141 6	0.7306	+0.002	8.830	282
4	1.255	1.0449	42 24	1.2950	140 9	0.7388	-.003	8.905	256
5	1.263	1.0457	42 8	1.2944	139 12	0.7466	-.008	8.948	233
6	1.270	1.0466	41 52	1.2938	138 15	0.7542	-.012	8.971	210
7	+1.278	1.0474	41 36	1.2932	137 18	+0.7616	-.014	8.968	187
8	1.285	1.0482	41 21	1.2925	136 21	0.7687	-.013	8.942	163
9	1.293	1.0490	41 6	1.2919	135 23	0.7756	-.009	8.909	135
10	1.300	1.0498	40 51	1.2913	134 25	0.7822	-.003	8.892	103
11	1.307	1.0506	40 36	1.2907	133 27	0.7886	+0.004	8.889	70
12	+1.314	1.0513	40 21	1.2900	132 29	+0.7949	+0.010	8.915	41
13	1.321	1.0520	40 6	1.2894	131 31	0.8009	+0.013	8.940	15
14	1.328	1.0528	39 52	1.2887	130 33	0.8067	+0.014	8.955	351
15	1.335	1.0535	39 38	1.2881	129 34	0.8123	+0.012	8.952	329
16	1.342	1.0543	39 24	1.2875	128 35	0.8178	+0.008	8.924	308
17	+1.349	1.0550	39 10	1.2868	127 36	+0.8230	+0.003	8.863	286
18	+1.356	1.0558	38 57	1.2862	126 36	+0.8281	-.001	8.790	261

228 APPARENT PLACES OF STARS, 1924.

QUANTITIES FOR CORRECTING THE PLACES OF STARS.

Mean Midnight.	f	Log. g	G	Log. h	H	Log. i	f'	Log. g'	G'
Aug. 18	^s +1.356	1.0558	38 57	1.2862	126 36	+0.8281	^s -001	8.790	261
19	1.363	1.0565	38 44	1.2856	125 37	0.8329	-005	8.717	232
20	1.369	1.0573	38 31	1.2850	124 37	0.8376	-007	8.689	198
21	1.375	1.0580	38 18	1.2844	123 38	0.8422	-008	8.719	167
22	1.381	1.0588	38 5	1.2838	122 38	0.8466	-007	8.768	141
23	+1.387	1.0595	37 53	1.2833	121 38	+0.8508	-005	8.812	120
24	1.393	1.0602	37 41	1.2828	120 37	0.8548	-002	8.835	101
25	1.400	1.0609	37 29	1.2822	119 37	0.8587	+001	8.829	83
26	1.406	1.0616	37 17	1.2817	118 36	0.8625	+005	8.802	62
27	1.412	1.0623	37 5	1.2811	117 35	0.8660	+007	8.754	37
28	+1.418	1.0630	36 53	1.2806	116 33	-0.8694	+008	8.718	3
29	1.424	1.0637	36 42	1.2801	115 32	0.8727	+007	8.736	327
30	1.430	1.0644	36 31	1.2796	114 30	0.8759	+004	8.802	294
31	1.436	1.0651	36 20	1.2791	113 29	0.8789	-001	8.875	267
Sept. 1	1.441	1.0659	36 9	1.2787	112 27	0.8817	-006	8.925	243
2	+1.446	1.0666	35 59	1.2783	111 25	+0.8844	-010	8.950	221
3	1.452	1.0673	35 49	1.2779	110 23	0.8870	-013	8.957	197
4	1.457	1.0680	35 39	1.2775	109 21	0.8895	-013	8.927	171
5	1.462	1.0687	35 29	1.2771	108 18	0.8918	-010	8.903	142
6	1.468	1.0694	35 19	1.2767	107 16	0.8939	-004	8.887	111
7	+1.473	1.0701	35 9	1.2763	106 13	-0.8959	+002	8.892	80
8	1.479	1.0709	35 0	1.2760	105 10	0.8978	+008	8.915	50
9	1.484	1.0717	34 51	1.2757	104 7	0.8996	+012	8.939	23
10	1.489	1.0724	34 42	1.2754	103 4	0.9012	+014	8.948	359
11	1.494	1.0732	34 33	1.2751	102 1	0.9028	+012	8.945	336
12	+1.499	1.0739	34 25	1.2749	100 58	+0.9042	+009	8.920	314
13	1.504	1.0747	34 17	1.2747	99 54	0.9054	+004	8.881	291
14	1.509	1.0754	34 9	1.2745	98 51	0.9065	-001	8.821	267
15	1.514	1.0762	34 1	1.2743	97 47	0.9075	-005	8.765	239
16	1.519	1.0770	33 53	1.2741	96 44	0.9084	-007	8.727	209
17	+1.524	1.0778	33 46	1.2740	95 40	+0.9091	-008	8.730	178
18	1.529	1.0786	33 39	1.2739	94 36	0.9097	-008	8.766	150
19	1.534	1.0794	33 32	1.2738	93 32	0.9102	-006	8.806	127
20	1.539	1.0803	33 25	1.2737	92 28	0.9105	-003	8.828	108
21	1.544	1.0812	33 19	1.2737	91 24	0.9108	000	8.826	90
22	+1.549	1.0820	33 12	1.2737	90 20	+0.9109	+003	8.809	71
23	1.554	1.0829	33 6	1.2737	89 16	0.9109	+006	8.751	47
24	1.559	1.0838	33 0	1.2737	88 12	0.9107	+007	8.696	14
25	1.564	1.0847	32 54	1.2737	87 8	0.9104	+007	8.696	336
26	1.569	1.0856	32 48	1.2738	86 4	0.9100	+005	8.765	301
27	+1.574	1.0865	32 42	1.2739	85 0	+0.9095	+001	8.852	274
28	1.579	1.0874	32 37	1.2741	83 56	0.9088	-004	8.918	250
29	1.584	1.0883	32 32	1.2742	82 52	0.9080	-009	8.945	229
30	1.589	1.0893	32 27	1.2744	81 48	0.9071	-012	8.946	206
Oct. 1	1.594	1.0903	32 22	1.2746	80 44	0.9061	-013	8.916	181
2	+1.599	1.0913	32 17	1.2748	79 40	+0.9049	-010	8.890	151
3	+1.604	1.0923	32 12	1.2751	78 35	+0.9036	-006	8.876	118

APPARENT PLACES OF STARS, 1924. 229

QUANTITIES FOR CORRECTING THE PLACES OF STARS.

Mean Midnight.	<i>f</i>	Log. <i>g</i>	<i>G</i>	Log. <i>h</i>	<i>H</i>	Log. <i>i</i>	<i>f'</i>	Log. <i>g'</i>	<i>G'</i>
Oct. 3	^s +1.604	1.0923	32 12	1.2751	78 35	+0.9036	^s -0.006	8.876	118
4	1.610	1.0933	32 7	1.2753	77 31	0.9021	+0.001	8.893	86
5	1.615	1.0943	32 2	1.2756	76 28	0.9005	+0.007	8.924	57
6	1.621	1.0954	31 58	1.2759	75 24	0.8988	+0.012	8.957	31
7	1.626	1.0965	31 54	1.2762	74 20	0.8970	+0.014	8.972	7
8	+1.632	1.0976	31 50	1.2765	73 16	+0.8950	+0.014	8.966	344
9	1.637	1.0988	31 46	1.2769	72 13	0.8928	+0.011	8.942	322
10	1.642	1.0999	31 42	1.2773	71 9	0.8905	+0.006	8.905	299
11	1.647	1.1011	31 39	1.2777	70 5	0.8881	+0.001	8.847	275
12	1.653	1.1023	31 35	1.2781	69 1	0.8855	-0.004	8.788	248
13	+1.658	1.1035	31 32	1.2786	67 58	+0.8828	-0.007	8.741	218
14	1.664	1.1047	31 28	1.2791	66 54	0.8800	-0.008	8.730	186
15	1.669	1.1059	31 25	1.2796	65 51	0.8770	-0.008	8.758	159
16	1.675	1.1071	31 21	1.2801	64 48	0.8738	-0.007	8.795	134
17	1.681	1.1084	31 18	1.2806	63 45	0.8705	-0.004	8.830	114
18	+1.687	1.1097	31 14	1.2811	62 42	+0.8670	-0.001	8.841	96
19	1.693	1.1110	31 11	1.2816	61 39	0.8633	+0.002	8.814	79
20	1.699	1.1123	31 7	1.2821	60 36	0.8595	+0.005	8.760	56
21	1.705	1.1136	31 4	1.2827	59 33	0.8555	+0.007	8.688	28
22	1.712	1.1150	31 1	1.2832	58 31	0.8514	+0.007	8.646	351
23	+1.718	1.1164	30 58	1.2838	57 29	+0.8470	+0.005	8.708	309
24	1.725	1.1178	30 55	1.2844	56 27	0.8425	+0.001	8.823	277
25	1.731	1.1192	30 52	1.2850	55 25	0.8378	-0.004	8.916	254
26	1.738	1.1206	30 49	1.2856	54 23	0.8330	-0.008	8.960	233
27	1.745	1.1221	30 46	1.2863	53 22	0.8279	-0.012	8.969	213
28	+1.752	1.1235	30 43	1.2869	52 20	+0.8226	-0.013	8.945	190
29	1.759	1.1250	30 40	1.2876	51 19	0.8172	-0.012	8.908	162
30	1.765	1.1265	30 37	1.2882	50 17	0.8115	-0.007	8.878	130
31	1.772	1.1280	30 34	1.2889	49 16	0.8056	-0.001	8.883	95
Nov. 1	1.779	1.1295	30 31	1.2895	48 15	0.7995	+0.006	8.928	64
2	+1.786	1.1310	30 28	1.2902	47 15	+0.7932	+0.011	8.969	37
3	1.793	1.1326	30 25	1.2908	46 14	0.7866	+0.015	8.994	14
4	1.801	1.1342	30 22	1.2914	45 13	0.7798	+0.015	8.999	352
5	1.808	1.1357	30 19	1.2921	44 12	0.7728	+0.013	8.980	331
6	1.816	1.1373	30 15	1.2927	43 12	0.7655	+0.008	8.938	309
7	+1.824	1.1389	30 12	1.2934	42 12	+0.7579	+0.003	8.875	287
8	1.832	1.1405	30 9	1.2941	41 13	0.7501	-0.002	8.806	260
9	1.840	1.1421	30 5	1.2947	40 13	0.7420	-0.006	8.744	229
10	1.848	1.1437	30 2	1.2954	39 14	0.7335	-0.008	8.716	197
11	1.856	1.1454	29 58	1.2960	38 14	0.7248	-0.008	8.737	167
12	+1.864	1.1471	29 54	1.2966	37 15	+0.7158	-0.007	8.770	141
13	1.872	1.1488	29 50	1.2973	36 16	0.7064	-0.005	8.819	119
14	1.881	1.1505	29 46	1.2979	35 17	0.6967	-0.002	8.840	101
15	1.890	1.1522	29 42	1.2985	34 18	0.6866	+0.001	8.830	83
16	1.899	1.1539	29 38	1.2991	33 19	0.6761	+0.004	8.782	63
17	+1.907	1.1556	29 34	1.2997	32 20	+0.6652	+0.006	8.711	39
18	+1.916	1.1573	29 30	1.3003	31 21	+0.6559	+0.007	8.641	3

230 APPARENT PLACES OF STARS, 1924.

QUANTITIES FOR CORRECTING THE PLACES OF STARS.

Mean Midnight.	<i>f</i>	Log. <i>g</i>	<i>G</i>	Log. <i>h</i>	<i>H</i>	Log. <i>i</i>	<i>f'</i>	Log. <i>g'</i>	<i>G'</i>
Nov. 18	^s +1.916	1.1573	29 30'	1.3003	31 21'	+0.6539	^s +0.007	8.641	3
19	1.925	1.1590	29 26	1.3009	30 23	0.6422	+0.005	8.668	318
20	1.934	1.1607	29 21	1.3015	29 25	0.6300	+0.002	8.782	283
21	1.943	1.1624	29 16	1.3020	28 27	0.6173	-0.003	8.892	257
22	1.952	1.1642	29 12	1.3026	27 29	0.6040	-0.008	8.966	236
23	+1.962	1.1659	29 7	1.3031	26 31	+0.5902	-0.012	8.995	217
24	1.971	1.1677	29 2	1.3036	25 34	0.5758	-0.014	8.992	196
25	1.981	1.1694	28 57	1.3041	24 36	0.5608	-0.014	8.957	173
26	1.990	1.1711	28 52	1.3046	23 38	0.5451	-0.010	8.914	144
27	2.000	1.1728	28 47	1.3051	22 41	0.5286	-0.004	8.886	111
28	+2.010	1.1745	28 42	1.3056	21 44	+0.5114	+0.003	8.904	77
29	2.019	1.1763	28 37	1.3060	20 47	0.4933	+0.009	8.952	47
30	2.029	1.1780	28 32	1.3065	19 50	0.4742	+0.014	8.999	21
Dec. 1	2.039	1.1798	28 26	1.3069	18 53	0.4541	+0.016	9.010	359
2	2.049	1.1815	28 20	1.3073	17 56	0.4329	+0.014	9.003	339
3	+2.059	1.1832	28 14	1.3077	16 59	+0.4105	+0.011	8.973	319
4	2.069	1.1850	28 8	1.3081	16 2	0.3867	+0.006	8.915	297
5	2.080	1.1867	28 2	1.3084	15 5	0.3613	+0.001	8.834	273
6	2.090	1.1884	27 56	1.3087	14 9	0.3343	-0.004	8.744	245
7	2.100	1.1901	27 50	1.3090	13 13	0.3052	-0.006	8.688	211
8	+2.110	1.1918	27 44	1.3093	12 16	+0.2739	-0.007	8.687	175
9	2.121	1.1935	27 38	1.3096	11 20	0.2401	-0.007	8.745	145
10	2.131	1.1952	27 31	1.3098	10 24	0.2033	-0.005	8.794	122
11	2.142	1.1969	27 24	1.3100	9 27	0.1628	-0.002	8.830	102
12	2.152	1.1986	27 17	1.3102	8 31	0.1180	+0.001	8.834	85
13	+2.163	1.2003	27 10	1.3104	7 35	+0.0679	+0.004	8.808	67
14	2.174	1.2019	27 3	1.3106	6 39	0.0111	+0.006	8.758	44
15	2.185	1.2036	26 56	1.3108	5 43	9.9456	+0.007	8.689	14
16	2.195	1.2053	26 49	1.3109	4 46	9.8682	+0.006	8.663	334
17	2.206	1.2069	26 42	1.3110	3 50	9.7738	+0.003	8.746	294
18	+2.216	1.2085	26 34	1.3111	2 54	+9.6527	-0.001	8.865	265
19	2.227	1.2101	26 26	1.3111	1 58	9.4842	-0.006	8.951	242
20	2.237	1.2117	26 19	1.3112	1 2	9.2048	-0.012	9.006	221
21	2.248	1.2133	26 12	1.3112	0 6	+8.1911	-0.015	9.026	202
22	2.258	1.2148	26 5	1.3111	359 10	-9.1114	-0.015	9.003	182
23	+2.269	1.2164	25 57	1.3111	358 14	-9.4377	-0.013	8.964	156
24	2.279	1.2179	25 49	1.3110	357 18	9.6219	-0.008	8.919	127
25	2.290	1.2195	25 41	1.3110	356 22	9.7506	-0.001	8.899	93
26	2.300	1.2210	25 33	1.3109	355 26	9.8498	+0.006	8.915	60
27	2.311	1.2225	25 25	1.3108	354 30	9.9303	+0.012	8.956	31
28	+2.321	1.2241	25 17	1.3107	353 34	-9.9981	+0.015	8.990	7
29	2.332	1.2256	25 9	1.3105	352 38	0.0566	+0.015	9.000	346
30	2.343	1.2271	25 1	1.3103	351 41	0.1081	+0.012	8.983	326
31	2.354	1.2286	24 53	1.3101	350 45	0.1540	+0.008	8.945	305
32	+2.365	1.2301	24 44	1.3099	349 48	-0.1953	+0.003	8.865	284

APPARENT PLACES OF STARS, 1924. 231

AT UPPER TRANSIT AT GREENWICH.

α Ursæ Minoris (*Polaris*). Mag. 2.1

Day.	JANUARY.		FEBRUARY.		MARCH.		APRIL.		MAY.		JUNE.	
	R.A.	Dec. N.	R.A.	Dec. N.	R.A.	Dec. N.	R.A.	Dec. N.	R.A.	Dec. N.	R.A.	Dec. N.
	^{h m} 133	[°] 88 54	^{h m} 133	[°] 88 54	^{h m} 133	[°] 88 53	^{h m} 133	[°] 88 53	^{h m} 133	[°] 88 53	^{h m} 133	[°] 88 53
1	^s 83.99	6.31	^s 49.55	7.45	^s 20.86	63.10	^s 4.40	54.46	^s 8.02	44.90	^s 29.71	37.85
2	83.05	6.44	48.47	7.42	20.00	62.90	4.12	54.14	8.51	44.59	30.70	37.70
3	82.12	6.58	47.34	7.38	19.12	62.68	3.89	53.81	9.04	44.31	31.68	37.57
4	81.17	6.72	46.15	7.33	18.23	62.44	3.72	53.47	9.61	44.03	32.64	37.44
5	80.16	6.87	44.94	7.26	17.37	62.19	3.61	53.12	10.20	43.75	33.57	37.33
6	79.08	7.02	43.73	7.16	16.56	61.92	3.56	52.79	10.79	43.49	34.45	37.21
7	77.94	7.16	42.54	7.05	15.81	61.65	3.55	52.45	11.38	43.25	35.31	37.09
8	76.74	7.28	41.40	6.92	15.11	61.36	3.57	52.13	11.94	43.01	36.16	36.96
9	75.51	7.37	40.31	6.77	14.47	61.08	3.62	51.81	12.47	42.78	37.02	36.82
10	74.28	7.44	39.26	6.61	13.88	60.80	3.67	51.52	12.98	42.54	37.92	36.68
11	73.07	7.49	38.26	6.46	13.33	60.52	3.70	51.22	13.47	42.30	38.89	36.54
12	71.89	7.54	37.29	6.32	12.80	60.24	3.71	50.93	13.96	42.05	39.94	36.40
13	70.75	7.57	36.35	6.18	12.28	59.97	3.69	50.64	14.49	41.79	41.07	36.28
14	69.64	7.60	35.41	6.04	11.75	59.71	{ 3 65 }	{ 50 35 }	15.08	41.53	42.24	36.18
15	68.56	7.63	34.46	5.89	11.20	59.46	3.60	49.73	15.75	41.26	43.43	36.11
16	67.50	7.65	33.50	5.76	10.62	59.21	3.63	49.40	16.50	41.00	44.59	36.05
17	66.45	7.68	32.51	5.63	10.02	58.95	3.74	49.06	17.33	40.76	45.70	36.00
18	65.38	7.71	31.49	5.49	9.41	58.67	3.95	48.73	18.20	40.54	46.74	35.96
19	64.31	7.75	30.43	5.35	8.80	58.38	4.23	48.40	19.08	40.34	47.73	35.92
20	63.19	7.79	29.35	5.18	8.23	58.08	4.57	48.08	19.93	40.15	48.69	35.88
21	62.03	7.83	28.29	4.99	7.71	57.76	4.95	47.79	20.72	39.98	49.64	35.82
22	60.82	7.85	27.26	4.78	7.28	57.43	5.33	47.51	21.45	39.81	50.61	35.76
23	59.58	7.87	26.29	4.56	6.93	57.10	5.67	47.24	22.15	39.64	51.62	35.70
24	58.30	7.87	25.41	4.33	6.67	56.78	5.96	46.96	22.82	39.45	52.69	35.63
25	57.04	7.84	24.61	4.10	6.46	56.48	6.20	46.70	23.52	39.25	53.80	35.55
26	55.81	7.79	23.87	3.88	6.25	56.19	6.42	46.43	24.26	39.04	54.96	35.49
27	54.65	7.73	23.16	3.68	6.02	55.93	6.65	46.15	25.05	38.83	56.14	35.45
28	53.56	7.66	22.44	3.48	5.75	55.66	6.90	45.85	25.89	38.62	57.33	35.42
29	52.54	7.59	21.68	3.29	5.44	55.38	7.21	45.54	26.79	38.41	58.52	35.40
30	51.55	7.53	20.86	3.10	5.09	55.09	7.59	45.22	27.74	38.21	59.70	35.41
31	50.56	7.48			4.73	54.78	8.02	44.90	28.72	38.02	60.85	35.43
32	49.55	7.45			4.40	54.46			29.71	37.85		

Mean R.A. $1^h 33^m 42^s.610$ Mean Dec. $+ 88^\circ 53' 52''.74$ Sec $\delta 51.995$ Tan $\delta + 51.985$

232 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

 α Ursæ Minoris (*Polaris*). Mag. 2.1

Day.	JULY.		AUGUST.		SEPTEMBER.		OCTOBER.		NOVEMBER.		DECEMBER.	
	R.A.	Dec. N.	R.A.	Dec. N.	R.A.	Dec. N.	R.A.	Dec. N.	R.A.	Dec. N.	R.A.	Dec. N.
	^h ^m	^s	^h ^m	^s	^h ^m	^s	^h ^m	^s	^h ^m	^s	^h ^m	^s
	1 34	88 53	1 34	88 53	1 35	88 53	1 35	88 53	1 35	88 54	1 34	88 54
1	0.85	35.43	35.17	38.01	4.40	45.11	22.81	55.05	27.05	6.78	74.14	17.08
2	1.97	35.45	36.11	38.17	5.22	45.37	23.34	55.42	26.87	7.19	73.31	17.38
3	3.04	35.48	37.06	38.33	6.10	45.64	23.84	55.81	26.62	7.59	72.48	17.66
4	4.07	35.51	38.04	38.47	7.01	45.93	24.29	56.20	26.30	7.98	71.66	17.93
5	5.07	35.54	39.07	38.62	7.93	46.23	24.66	56.61	25.95	8.35	70.88	18.18
6	6.07	35.55	40.16	38.77	8.81	46.56	24.94	57.02	25.60	8.71	70.12	18.43
7	7.08	35.56	41.31	38.94	9.62	46.90	25.14	57.42	25.28	9.04	69.40	18.68
8	8.16	35.56	42.49	39.13	10.35	47.25	25.29	57.81	24.99	9.37	68.70	18.93
9	9.31	35.57	43.65	39.35	11.00	47.60	25.43	58.17	24.72	9.70	67.98	19.18
10	10.52	35.58	44.78	39.58	11.59	47.94	25.60	58.53	24.48	10.03	67.25	19.44
11	11.78	35.62	45.84	39.82	12.15	48.26	25.76	58.87	24.24	10.37	66.49	19.70
12	13.05	35.67	46.82	40.07	12.71	48.58	25.97	59.22	23.98	10.73	65.68	19.97
13	14.31	35.75	47.74	40.31	13.29	48.89	26.20	59.57	23.71	11.09	64.82	20.23
14	15.52	35.86	48.61	40.55	13.91	49.20	26.46	59.93	23.39	11.45	63.91	20.49
15	16.67	35.97	49.46	40.77	14.56	49.50	26.71	60.30	23.02	11.82	62.95	20.75
16	17.75	36.09	50.33	40.99	15.24	49.81	26.95	60.68	22.59	12.19	61.94	20.99
17	18.77	36.19	51.23	41.19	15.93	50.12	27.16	61.06	22.11	12.55	60.89	21.20
18	19.77	36.29	52.17	41.40	16.61	50.45	27.33	61.46	21.56	12.91	59.84	21.40
19	20.77	36.37	53.15	41.61	17.28	50.79	27.44	61.86	20.97	13.25	58.82	21.58
20	21.81	36.45	54.16	41.84	17.90	51.14	27.48	62.27	20.36	13.57	57.83	21.76
21	22.89	36.52	55.17	42.07	18.51	51.50	27.46	62.67	19.74	13.88	56.91	21.94
22	24.01	36.60	56.18	42.31	19.04	51.87	27.40	63.06	19.15	14.18	56.05	22.12
23	25.17	36.69	57.18	42.58	19.52	52.24	27.30	63.45	18.62	14.47	55.21	22.30
24	26.35	36.79	58.14	42.85	19.94	52.62	27.18	63.82	18.14	14.77	54.37	22.49
25	27.54	36.90	59.06	43.14	20.32	53.00	27.07	64.17	17.69	15.08	53.48	22.70
26	28.73	37.02	59.93	43.44	20.67	53.36	27.01	64.51	17.24	15.40	52.52	22.91
27	29.90	37.16	60.73	43.73	21.02	53.70	26.99	64.86	16.77	15.73	51.47	23.12
28	31.04	37.32	61.48	44.03	21.40	54.03	27.02	65.21	16.24	16.08	50.34	23.32
29	32.15	37.49	62.20	44.31	21.83	54.36	27.08	65.58	15.62	16.43	49.17	23.49
30	33.20	37.67	62.91	44.58	22.30	54.71	27.13	65.96	14.92	16.77	47.98	23.64
31	34.21	37.84	63.63	44.85	22.81	55.05	27.13	66.37	14.14	17.08	46.80	23.76
32	35.17	38.01	64.40	45.11			27.05	66.78			45.66	23.88

Mean R.A. 1^h 33^m 42^s.610 Mean Dec. + 88° 53' 52".74 Sec δ 51.995 Tan δ + 51.985

APPARENT PLACES OF STARS, 1924. 233

AT UPPER TRANSIT AT GREENWICH.

51 H Cephei. Mag. 5.3

Day.	JANUARY.		FEBRUARY.		MARCH.		APRIL.		MAY.		JUNE.	
	R.A.	Dec. N.	R.A.	Dec. N.	R.A.	Dec. N.	R.A.	Dec. N.	R.A.	Dec. N.	R.A.	Dec. N.
	^h ^m 7 58 ^s 7 10 ^o		^h ^m 7 58 ^s 7 10 ^o		^h ^m 7 58 ^s 7 10 ^o		^h ^m 7 58 ^s 7 10 ^o		^h ^m 7 58 ^s 7 10 ^o		^h ^m 7 58 ^s 7 10 ^o	
1	47.37	5.67	47.58	15.53	40.58	23.12	28.34	26.77	16.19	24.84	7.73	18.10
2	47.51	5.96	47.50	15.84	40.28	23.35	27.88	26.82	15.79	24.68	7.56	17.80
3	47.66	6.24	47.41	16.17	39.94	23.57	27.40	26.83	15.41	24.50	7.42	17.51
4	47.83	6.53	47.28	16.50	39.58	23.79	26.93	26.84	15.05	24.31	7.30	17.22
5	48.00	6.84	47.13	16.83	39.20	24.00	26.47	26.83	14.70	24.11	7.19	16.94
6	48.16	7.17	46.95	17.16	38.80	24.20	26.02	26.81	14.38	23.92	7.09	16.68
7	48.30	7.51	46.74	17.48	38.38	24.37	25.57	26.78	14.07	23.73	6.99	16.43
8	48.41	7.86	46.51	17.78	37.97	24.52	25.15	26.73	13.78	23.54	6.87	16.17
9	48.48	8.21	46.27	18.07	37.56	24.66	24.74	26.69	13.50	23.37	6.73	15.92
10	48.53	8.57	46.02	18.34	37.15	24.80	24.35	26.64	13.22	23.20	6.59	15.66
11	48.55	8.91	45.78	18.60	36.76	24.93	23.98	26.60	12.93	23.04	6.45	15.38
12	48.55	9.24	45.54	18.86	36.37	25.04	23.60	26.56	12.63	22.87	6.30	15.08
13	48.55	9.57	45.30	19.10	36.00	25.16	23.22	26.54	12.32	22.70	6.17	14.77
14	48.55	9.88	45.07	19.35	35.64	25.28	22.82	26.52	12.00	22.52	6.08	14.43
15	48.54	10.19	44.86	19.60	35.28	25.42	22.41	26.49	11.66	22.32	6.02	14.10
16	48.53	10.50	44.65	19.86	34.92	25.56	21.98	26.46	11.33	22.10	5.99	13.77
17	48.53	10.80	44.44	20.13	34.55	25.70	21.53	26.41	11.02	21.85	5.99	13.45
18	48.54	11.10	44.21	20.42	34.15	25.84	21.08	26.33	10.75	21.59	6.01	13.14
19	48.55	11.41	43.96	20.70	33.73	25.97	20.64	26.23	10.51	21.32	6.03	12.85
20	48.57	11.74	43.68	20.98	33.30	26.10	20.22	26.11	10.31	21.06	6.03	12.57
21	48.58	12.08	43.38	21.25	32.85	26.20	19.83	25.98	10.12	20.81	6.01	12.30
22	48.57	12.43	43.05	21.51	32.38	26.28	19.47	25.84	9.94	20.57	5.98	12.03
23	48.53	12.78	42.71	21.75	31.94	26.34	19.13	25.71	9.75	20.35	5.94	11.76
24	48.46	13.13	42.37	21.96	31.51	26.38	18.80	25.59	9.54	20.14	5.89	11.46
25	48.36	13.48	42.03	22.16	31.10	26.41	18.48	25.49	9.32	19.92	5.85	11.15
26	48.24	13.81	41.71	22.35	30.71	26.44	18.14	25.40	9.09	19.70	5.82	10.82
27	48.10	14.11	41.41	22.53	30.34	26.47	17.78	25.31	8.84	19.48	5.81	10.48
28	47.97	14.41	41.13	22.71	29.98	26.52	17.40	25.22	8.59	19.23	5.81	10.14
29	47.84	14.70	40.86	22.91	29.61	26.58	17.00	25.11	8.35	18.97	5.84	9.81
30	47.74	14.97	40.58	23.12	29.21	26.65	16.60	24.99	8.12	18.69	5.89	9.48
31	47.66	15.24			28.78	26.71	16.19	24.84	7.91	18.40	5.96	9.15
32	47.58	15.53			28.34	26.77			7.73	18.10		

Mean R.A. 7^h 5^m 27^s.526 Mean Dec. + 87° 10' 15".95 Sec δ 20.262 Tan δ + 20.237

234 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

51 H Cephei. Mag. 5.3

Day.	JULY.		AUGUST.		SEPTEMBER.		OCTOBER.		NOVEMBER.		DECEMBER.	
	R.A.	Dec. N.	R.A.	Dec. N.	R.A.	Dec. N.	R.A.	Dec. N.	R.A.	Dec. N.	R.A.	Dec. N.
	^h ^m ^s	[°] ['] ^{''}	^h ^m ^s	[°] ['] ^{''}	^h ^m ^s	[°] ['] ^{''}	^h ^m ^s	[°] ['] ^{''}	^h ^m ^s	[°] ['] ^{''}	^h ^m ^s	[°] ['] ^{''}
	7 587 9		7 587 9		7 587 9		7 587 9		7 587 9		7 687 9	
1	5.96	69.15	11.44	59.59	22.51	52.30	36.88	48.41	53.01	48.73	6.46	53.67
2	6.04	68.83	11.71	59.34	22.90	52.10	37.41	48.31	53.57	48.83	6.83	53.94
3	6.15	68.53	11.96	59.10	23.31	51.89	37.96	48.23	54.10	48.96	7.16	54.21
4	6.25	68.25	12.20	58.84	23.75	51.67	38.54	48.16	54.61	49.10	7.48	54.47
5	6.35	67.96	12.45	58.57	24.22	51.45	39.13	48.11	55.09	49.25	7.78	54.72
6	{ 6.44 }	{ 67.68 }	12.71	58.28	24.72	51.25	39.69	48.09	55.54	49.39	8.07	54.96
7	6.56	67.11	13.00	57.97	25.23	51.07	40.24	48.08	55.97	49.52	8.38	55.19
8	6.62	66.81	13.31	57.66	25.75	50.92	40.77	48.09	56.40	49.63	8.69	55.42
9	6.69	66.49	13.66	57.37	26.26	50.79	41.28	48.09	56.84	49.74	9.00	55.65
10	6.78	66.15	14.04	57.09	26.75	50.67	41.76	48.09	57.28	49.85	9.33	55.89
11	6.90	65.80	14.44	56.82	27.22	50.55	42.23	48.09	57.74	49.97	9.66	56.14
12	7.06	65.45	14.84	56.57	27.67	50.43	42.70	48.08	58.21	50.08	9.99	56.40
13	7.25	65.12	15.22	56.35	28.10	50.31	43.17	48.05	58.68	50.21	10.32	56.67
14	7.46	64.80	15.58	56.13	28.53	50.17	43.67	48.03	59.17	50.34	10.64	56.96
15	7.69	64.49	15.92	55.93	28.97	50.01	44.18	48.00	59.65	50.50	10.94	57.27
16	7.91	64.21	16.24	55.72	29.43	49.86	44.71	47.98	60.13	50.67	11.21	57.58
17	8.11	63.94	16.57	55.49	29.89	49.70	45.25	47.97	60.61	50.86	11.46	57.90
18	8.29	63.67	16.90	55.24	30.38	49.55	45.80	47.98	61.06	51.06	11.69	58.22
19	8.46	63.40	17.23	54.99	30.88	49.41	46.35	48.00	61.50	51.28	11.90	58.53
20	8.61	63.12	17.58	54.74	31.39	49.28	46.90	48.04	61.92	51.49	12.11	58.82
21	8.76	62.83	17.95	54.48	31.91	49.17	47.45	48.10	62.31	51.69	12.28	59.10
22	8.92	62.52	18.34	54.23	32.45	49.08	47.97	48.17	62.68	51.89	12.48	59.36
23	9.09	62.20	18.74	53.99	32.98	49.00	48.48	48.26	63.05	52.07	12.71	59.61
24	9.29	61.88	19.17	53.76	33.51	48.93	48.96	48.34	63.43	52.25	12.96	59.87
25	9.51	61.56	19.61	53.55	34.01	48.87	49.43	48.40	63.84	52.41	13.22	60.16
26	9.75	61.25	20.05	53.35	34.50	48.81	49.89	48.45	64.26	52.58	13.48	60.47
27	10.01	60.94	20.49	53.17	34.98	48.76	50.36	48.49	64.71	52.75	13.73	60.79
28	10.29	60.64	20.92	53.00	35.45	48.69	50.85	48.52	65.16	52.95	13.96	61.13
29	10.57	60.35	21.34	52.83	35.91	48.61	51.37	48.55	65.61	53.17	14.14	61.47
30	10.86	60.09	21.74	52.66	36.38	48.51	51.90	48.60	66.05	53.41	14.29	61.82
31	11.16	59.84	22.13	52.49	36.88	48.41	52.45	48.65	66.46	53.67	14.40	62.17
32	11.44	59.59	22.51	52.30			53.01	48.73			14.49	62.50

Mean R.A. 7^h 5^m 27^s.526 Mean Dec. + 87° 10' 15".95 Sec δ 20.262 Tan δ + 20.237

APPARENT PLACES OF STARS, 1924. 235

AT UPPER TRANSIT AT GREENWICH.

4 B Ursæ Minoris. Mag. 7.0

Day.	JANUARY.		FEBRUARY.		MARCH.		APRIL.		MAY.		JUNE.	
	R.A.	Dec. N.	R.A.	Dec. N.	R.A.	Dec. N.	R.A.	Dec. N.	R.A.	Dec. N.	R.A.	Dec. N.
	h m		h m		h m		h m		h m		h m	
	8 23	88 51	8 23	88 51	8 22	88 51	8 22	88 51	8 21	88 51	8 21	88 51
1	15.56	25.68	26.81	35.14	78.71	44.14	53.89	50.63	82.89	51.75	55.06	47.41
2	16.16	25.92	26.95	35.46	78.25	44.42	52.85	50.78	81.77	51.69	54.33	47.17
3	16.82	26.16	27.08	35.79	77.72	44.72	51.76	50.92	80.67	51.63	53.65	46.92
4	17.52	26.40	27.15	36.14	77.11	45.03	50.65	51.03	79.60	51.54	53.02	46.68
5	18.25	26.66	27.16	36.49	76.44	45.32	49.55	51.13	78.57	51.44	52.42	46.45
6	18.99	26.94	27.09	36.85	75.71	45.60	48.45	51.21	77.57	51.33	51.86	46.23
7	19.70	27.24	26.94	37.20	74.94	45.86	47.38	51.28	76.62	51.21	51.31	46.01
8	20.34	27.56	26.73	37.55	74.15	46.10	46.33	51.35	75.70	51.11	50.74	45.80
9	20.90	27.89	26.49	37.88	73.34	46.34	45.32	51.41	74.82	51.02	50.14	45.59
10	21.39	28.22	26.23	38.20	72.54	46.56	44.34	51.46	73.95	50.93	49.51	45.37
11	21.81	28.55	25.95	38.51	71.75	46.78	43.39	51.53	73.07	50.84	48.85	45.14
12	22.19	28.86	25.67	38.81	70.98	46.99	42.45	51.59	72.17	50.77	48.18	44.88
13	22.53	29.16	25.40	39.11	70.23	47.20	41.50	51.66	71.24	50.69	47.51	44.61
14	22.85	29.46	25.15	39.40	69.51	47.40	40.54	51.74	70.27	50.59	46.90	44.32
15	23.16	29.76	24.92	39.70	68.81	47.62	39.54	51.82	69.25	50.47	46.36	44.02
16	23.49	30.05	24.71	40.01	68.10	47.85	38.48	51.89	68.22	50.34	45.91	43.71
17	23.84	30.34	24.49	40.32	67.37	48.08	37.37	51.94	67.22	50.18	45.54	43.41
18	24.20	30.64	24.26	40.65	66.60	48.32	36.22	51.98	66.28	49.99	45.21	43.12
19	24.57	30.94	23.99	40.98	65.78	48.55	35.06	51.99	65.41	49.80	44.90	42.84
20	24.96	31.25	23.65	41.32	64.88	48.76	33.94	51.98	64.61	49.60	44.58	42.57
21	25.34	31.58	23.25	41.65	63.92	48.96	32.87	51.95	63.87	49.42	44.22	42.32
22	25.70	31.92	22.78	41.98	62.94	49.15	31.86	51.92	63.17	49.24	43.83	42.07
23	26.00	32.26	22.23	42.29	61.94	49.32	30.91	51.88	62.47	49.08	43.40	41.81
24	26.23	32.61	21.65	42.58	60.96	49.46	30.00	51.85	61.73	48.92	42.94	41.54
25	26.38	32.96	21.08	42.85	60.04	49.60	29.09	51.83	60.95	48.77	42.48	41.25
26	26.46	33.31	20.53	43.10	59.16	49.72	28.16	51.83	60.13	48.61	42.04	40.94
27	26.49	33.64	20.04	43.35	58.32	49.85	27.20	51.82	59.27	48.45	41.62	40.63
28	26.50	33.96	19.58	43.60	57.50	49.99	26.18	51.82	58.39	48.27	41.25	40.31
29	26.52	34.26	19.15	43.86	56.67	50.15	25.11	51.81	57.51	48.07	40.94	39.99
30	26.58	34.55	18.71	44.14	55.80	50.31	24.00	51.79	56.65	47.87	40.68	39.65
31	26.68	34.84			54.87	50.47	22.89	51.75	55.83	47.64	40.47	39.33
32	26.81	35.14			53.89	50.63			55.06	47.41		

Mean R.A. 8^h 22^m 39^s.807 Mean Dec. + 88° 51' 40".31 Sec δ 50.316 Tan δ + 50.306

236 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

4 B Ursæ Minoris. Mag. 7.0

Day.	JULY.		AUGUST.		SEPTEMBER.		OCTOBER.		NOVEMBER.		DECEMBER.	
	R.A.	Dec. N.	R.A.	Dec. N.	R.A.	Dec. N.	R.A.	Dec. N.	R.A.	Dec. N.	R.A.	Dec. N.
	^h ^m 8 21 88 51	^h ^m 8 21 88 51	^h ^m 8 21 88 51	^h ^m 8 21 88 51	^h ^m 8 21 88 51	^h ^m 8 21 88 51	^h ^m 8 22 88 51	^h ^m 8 22 88 51	^h ^m 8 23 88 51	^h ^m 8 23 88 51	^h ^m 8 23 88 51	^h ^m 8 23 88 51
1	40.47	39.33	42.23	28.93	59.81	19.32	28.95	12.18	6.78	8.66	43.43	10.18
2	40.30	39.02	42.57	28.63	60.49	19.04	30.06	11.96	8.18	8.63	44.58	10.34
3	40.18	38.71	42.87	28.33	61.21	18.74	31.25	11.76	9.57	8.63	45.65	10.52
4	40.07	38.42	43.14	28.03	62.00	18.43	32.51	11.56	10.90	8.64	46.66	10.69
5	39.97	38.13	43.39	27.71	62.86	18.12	33.81	11.38	12.16	8.66	47.64	10.85
6	39.85	37.84	43.67	27.37	63.79	17.82	35.11	11.23	13.36	8.68	48.59	11.01
7	39.69	37.55	44.01	27.01	64.79	17.53	36.38	11.09	14.52	8.70	49.55	11.16
8	39.49	37.26	44.43	26.64	65.82	17.25	37.59	10.97	15.65	8.71	50.51	11.31
9	39.28	36.95	44.92	26.28	66.85	16.99	38.76	10.86	16.79	8.71	51.51	11.46
10	39.06	36.62	45.49	25.92	67.84	16.76	39.88	10.75	17.95	8.71	52.54	11.62
11	38.88	36.28	46.11	25.59	68.79	16.54	40.97	10.62	19.13	8.71	53.58	11.78
12	38.78	35.92	46.76	25.27	69.70	16.32	42.06	10.47	20.34	8.71	54.63	11.95
13	38.75	35.56	47.39	24.97	70.56	16.09	43.16	10.33	21.59	8.72	55.70	12.14
14	38.81	35.20	47.98	24.68	71.41	15.86	44.29	10.18	22.87	8.74	56.75	12.35
15	38.94	34.85	48.52	24.40	72.27	15.61	45.45	10.04	24.17	8.77	57.79	12.57
16	39.11	34.51	49.03	24.10	73.16	15.36	46.66	9.89	25.47	8.83	58.77	12.81
17	39.29	34.19	49.52	23.81	74.08	15.10	47.90	9.76	26.77	8.89	59.71	13.05
18	39.43	33.89	50.00	23.49	75.06	14.85	49.18	9.64	28.05	8.97	60.58	13.29
19	39.53	33.59	50.51	23.17	76.08	14.59	50.49	9.54	29.30	9.06	61.39	13.53
20	39.60	33.29	51.05	22.84	77.13	14.34	51.82	9.45	30.49	9.16	62.15	13.76
21	39.63	32.97	51.63	22.51	78.22	14.11	53.14	9.38	31.63	9.26	62.91	13.98
22	39.65	32.65	52.25	22.18	79.36	13.89	54.44	9.32	32.71	9.36	63.68	14.18
23	39.68	32.32	52.93	21.86	80.50	13.69	55.70	9.27	33.78	9.45	64.49	14.38
24	39.74	31.98	53.66	21.54	81.64	13.50	56.92	9.22	34.86	9.52	65.36	14.58
25	{ ³⁰ 84 ⁴⁰ 00}	{ ³¹ 62 ³¹ 26}	54.44	21.23	82.76	13.32	58.09	9.17	35.98	9.59	66.27	14.80
26	40.21	30.90	55.24	20.93	83.84	13.15	59.23	9.12	37.15	9.65	67.21	15.03
27	40.46	30.55	56.06	20.65	84.88	12.98	60.37	9.05	38.37	9.72	68.14	15.28
28	40.76	30.21	56.87	20.37	85.89	12.79	61.54	8.97	39.64	9.80	69.01	15.56
29	41.10	29.88	57.66	20.11	86.89	12.60	62.76	8.88	40.93	9.91	69.83	15.85
30	41.47	29.55	58.41	19.85	87.90	12.39	64.05	8.79	42.21	10.03	70.55	16.14
31	41.86	29.23	59.12	19.59	88.95	12.18	65.39	8.72	43.43	10.18	71.20	16.44
32	42.23	28.93	59.81	19.32			66.78	8.66			71.78	16.73

Mean R.A. 8^h 22^m 39^s.807 Mean Dec. + 88° 51' 40".31 Sec δ 50.316 Tan δ + 50.306

APPARENT PLACES OF STARS, 1924. 237

AT UPPER TRANSIT AT GREENWICH.

6 B Ursæ Minoris. Mag. 6.3

Day.	JANUARY.		FEBRUARY.		MARCH.		APRIL.		MAY.		JUNE.	
	R.A.	Dec. N.	R.A.	Dec. N.	R.A.	Dec. N.	R.A.	Dec. N.	R.A.	Dec. N.	R.A.	Dec. N.
	^h ^m	[°] [']	^h ^m	[°] [']	^h ^m	[°] [']	^h ^m	[°] [']	^h ^m	[°] [']	^h ^m	[°] [']
	12 14	88 6	12 14	88 7	12 14	88 7	12 14	88 7	12 14	88 7	12 14	88 7
1	17.48	59.51	37.65	1.71	50.68	8.56	53.93	18.32	45.93	26.81	29.53	31.65
2	18.10	59.47	38.25	1.85	51.03	8.84	53.85	18.67	45.47	27.06	28.88	31.71
3	18.74	59.42	38.88	2.00	51.37	9.14	53.72	19.01	44.99	27.29	28.25	31.75
4	19.40	59.37	39.51	2.17	51.69	9.46	53.56	19.35	44.49	27.51	27.63	31.79
5	20.10	59.33	40.13	2.36	51.97	9.78	53.37	19.68	43.99	27.72	27.04	31.82
6	20.83	59.30	40.72	2.57	52.22	10.12	53.17	20.00	43.49	27.92	26.48	31.85
7	21.58	59.29	41.29	2.80	52.44	10.45	52.96	20.31	43.01	28.11	25.93	31.89
8	22.35	59.31	41.82	3.03	52.61	10.78	52.74	20.61	42.54	28.29	25.38	31.93
9	23.10	59.35	42.31	3.27	52.76	11.11	52.52	20.89	42.09	28.47	24.83	31.98
10	23.83	59.40	42.78	3.51	52.89	11.43	52.31	21.17	41.66	28.64	24.25	32.02
11	24.53	59.48	43.23	3.74	53.02	11.74	52.11	21.45	41.24	28.83	23.64	32.07
12	25.20	59.54	43.66	3.97	53.14	12.05	51.93	21.73	40.81	29.02	22.99	32.11
13	25.85	59.61	44.09	4.20	53.26	12.34	51.76	22.01	40.36	29.23	22.29	32.14
14	26.47	59.69	44.53	4.42	53.40	12.64	51.59	22.30	39.88	29.43	21.59	32.14
15	27.08	59.77	44.98	4.64	53.54	12.93	51.40	22.61	39.35	29.62	20.90	32.12
16	27.70	59.84	45.44	4.84	53.70	13.23	51.17	22.92	38.77	29.80	20.23	32.07
17	28.33	59.90	45.91	5.07	53.86	13.54	50.91	23.23	38.17	29.96	19.58	32.01
18	28.96	59.96	46.40	5.31	54.01	13.87	50.60	23.54	37.55	30.10	18.98	31.95
19	29.61	60.03	46.89	5.55	54.14	14.21	50.24	23.82	36.94	30.22	18.42	31.89
20	30.27	60.09	47.37	5.82	54.23	14.55	49.85	24.09	36.35	30.32	17.87	31.85
21	30.96	60.17	47.82	6.10	54.28	14.90	49.45	24.34	35.80	30.42	17.31	31.81
22	31.67	60.27	48.23	6.40	54.27	15.25	49.06	24.58	35.28	30.51	16.75	31.78
23	32.38	60.39	48.59	6.70	54.22	15.58	48.71	24.80	34.79	30.62	16.16	31.76
24	33.08	60.53	48.91	6.99	54.15	15.89	48.39	25.02	34.29	30.74	15.54	31.73
25	33.75	60.69	49.18	7.28	54.08	16.19	48.08	25.25	33.79	30.86	14.89	31.70
26	34.37	60.85	49.44	7.55	54.02	16.48	47.78	25.49	33.25	31.00	14.22	31.66
27	34.96	61.01	49.72	7.81	53.99	16.76	47.47	25.75	32.69	31.13	13.54	31.60
28	35.50	61.17	50.01	8.05	53.98	17.04	47.14	26.01	32.10	31.26	12.87	31.52
29	36.01	61.32	50.33	8.30	53.99	17.34	46.77	26.28	31.47	31.38	12.21	31.43
30	36.54	61.46	50.68	8.56	53.99	17.66	46.36	26.55	30.83	31.49	11.57	31.32
31	37.08	61.58			53.97	17.99	45.93	26.81	30.18	31.57	10.95	31.21
32	37.65	61.71			53.93	18.32			29.53	31.65		

Mean R.A. 12^h 14^m 31^s.221 Mean Dec. + 88° 7' 16".46 Sec δ 30.502 Tan δ + 30.486

238 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

6 B Ursæ Minoris. Mag. 6.3

Day.	JULY.		AUGUST.		SEPTEMBER.		OCTOBER.		NOVEMBER.		DECEMBER.	
	R.A.	Dec. N.	R.A.	Dec. N.	R.A.	Dec. N.	R.A.	Dec. N.	R.A.	Dec. N.	R.A.	Dec. N.
	^h ^m		^h ^m		^h ^m		^h ^m		^h ^m		^h ^m	
	12 13 88 7		12 13 88 7		12 13 88 7		12 13 88 6		12 13 88 6		12 14 88 6	
	^s		^s		^s		^s		^s		^s	
1	70.95	31.21	54.02	25.66	43.04	16.30	40.04	64.81	46.56	53.34	1.45	44.89
2	70.35	31.09	53.62	25.42	42.79	15.98	40.04	64.40	46.98	52.97	2.13	44.69
3	69.77	30.97	53.22	25.19	42.51	15.65	40.08	63.99	47.43	52.62	2.78	44.52
4	69.22	30.85	52.80	24.96	42.22	15.29	40.15	63.57	47.89	52.29	3.41	44.35
5	68.69	30.74	52.35	24.73	41.94	14.91	40.27	63.15	48.34	51.99	4.01	44.19
6	68.16	30.62	51.87	24.49	41.68	14.52	40.45	62.74	48.77	51.70	4.60	44.03
7	67.62	30.51	51.36	24.24	41.46	14.13	40.65	62.35	49.19	51.41	5.17	43.87
8	67.05	30.41	50.85	23.96	41.30	13.73	40.84	61.98	49.59	51.12	5.75	43.69
9	66.45	30.30	50.35	23.66	41.19	13.34	41.01	61.62	49.97	50.83	6.34	43.51
10	65.82	30.18	49.89	23.34	41.10	12.95	41.18	61.27	50.35	50.53	6.95	43.33
11	65.16	30.04	49.47	23.01	41.03	12.58	41.33	60.92	50.75	50.23	7.58	43.15
12	64.50	29.88	49.10	22.68	40.96	12.23	41.45	60.57	51.16	49.92	8.23	42.98
13	63.86	29.69	48.77	22.36	40.86	11.89	41.57	60.21	51.58	49.60	8.91	42.82
14	63.26	29.49	48.46	22.05	40.73	11.55	41.70	59.85	52.04	49.29	9.62	42.67
15	62.71	29.28	48.15	21.76	40.59	11.21	41.83	59.48	52.53	48.98	10.35	42.53
16	62.19	29.07	47.83	21.48	40.45	10.86	41.99	59.10	53.06	48.69	11.09	42.41
17	61.71	28.87	47.49	21.20	40.31	10.50	42.17	58.71	53.62	48.40	11.83	42.31
18	61.24	28.69	47.13	20.92	40.17	10.12	42.38	58.32	54.20	48.12	12.55	42.23
19	60.75	28.51	46.75	20.64	40.05	9.74	42.63	57.93	54.77	47.87	13.23	42.15
20	60.25	28.35	46.36	20.34	39.95	9.34	42.93	57.56	55.34	47.62	13.87	42.08
21	59.72	28.18	45.97	20.02	39.88	8.94	43.25	57.19	55.89	47.39	14.50	41.99
22	59.17	28.00	45.59	19.69	39.84	8.53	43.58	56.83	56.42	47.16	15.11	41.90
23	58.60	27.81	45.22	19.35	39.84	8.13	43.91	56.49	56.91	46.93	15.72	41.79
24	58.03	27.62	44.88	19.01	39.86	7.74	44.25	56.16	57.39	46.69	16.36	41.68
25	57.45	27.41	44.58	18.66	39.90	7.35	44.56	55.83	57.87	46.43	17.04	41.57
26	56.88	27.19	44.31	18.31	$\left\{ \begin{smallmatrix} 39.97 \\ 40.04 \end{smallmatrix} \right\}$	$\left\{ \begin{smallmatrix} 6.88 \\ 6.83 \end{smallmatrix} \right\}$	44.83	55.51	58.37	46.17	17.75	41.47
27	56.34	26.95	44.07	17.95	40.09	6.27	45.08	55.18	58.90	45.89	18.51	41.37
28	55.82	26.70	43.86	17.60	40.11	5.91	45.32	54.83	59.48	45.61	19.29	41.30
29	55.33	26.45	43.66	17.27	40.11	5.56	45.57	54.47	60.11	45.35	20.06	41.25
30	54.86	26.18	43.46	16.95	40.07	5.19	45.85	54.10	60.77	45.11	20.82	41.23
31	54.43	25.92	43.26	16.62	40.04	4.81	46.18	53.72	61.45	44.89	21.55	41.23
32	54.02	25.66	43.04	16.30			46.56	53.34			22.24	41.23

Mean R.A. 12^h 14^m 31^s.221 Mean Dec. + 88° 7' 16".46 Sec δ 30.502 Tan δ + 30.486

APPARENT PLACES OF STARS, 1924. 239

AT UPPER TRANSIT AT GREENWICH.

57 B Ursæ Minoris. Mag. 7.2

Day.	JANUARY.		FEBRUARY.		MARCH.		APRIL.		MAY.		JUNE.	
	R.A.	Dec. N.	R.A.	Dec. N.	R.A.	Dec. N.	R.A.	Dec. N.	R.A.	Dec. N.	R.A.	Dec. N.
	^h ^m ^s 15 1 87 31	[°] 24 29	^h ^m ^s 15 1 87 31	[°] 19 36	^h ^m ^s 15 1 87 31	[°] 30 26	^h ^m ^s 15 1 87 31	[°] 20 27	^h ^m ^s 15 1 87 31	[°] 42 17	^h ^m ^s 15 1 87 31	[°] 26 54
1	1.69	24.29	15.69	19.36	30.26	20.27	42.17	26.54	46.34	35.58	42.01	44.69
2	2.01	24.07	16.18	19.27	30.75	20.37	42.47	26.82	46.34	35.92	41.71	44.95
3	2.34	23.83	16.69	19.18	31.25	20.48	42.76	27.12	46.30	36.26	41.40	45.20
4	2.67	23.58	17.23	19.11	31.76	20.61	43.02	27.43	46.24	36.59	41.09	45.43
5	3.04	23.31	17.79	19.05	32.26	20.76	43.25	27.74	46.18	36.92	40.79	45.65
6	3.44	23.05	18.35	19.01	32.75	20.93	43.46	28.05	46.11	37.23	40.50	45.86
7	3.86	22.80	18.91	18.99	33.21	21.12	43.65	28.36	46.03	37.53	40.22	46.08
8	4.31	22.56	19.45	19.00	33.65	21.31	43.82	28.66	45.95	37.82	39.95	46.29
9	4.79	22.34	19.98	19.02	34.06	21.51	44.00	28.95	45.88	38.11	39.68	46.51
10	5.27	22.15	20.49	19.05	34.47	21.70	44.18	29.23	45.82	38.39	39.41	46.74
11	5.75	21.97	20.99	19.07	34.86	21.89	44.36	29.50	45.76	38.66	39.11	46.98
12	6.21	21.80	21.47	19.10	35.24	22.08	44.54	29.76	45.71	38.95	38.78	47.23
13	6.66	21.65	21.96	19.13	35.62	22.27	44.73	30.03	45.66	39.25	38.41	47.47
14	7.10	21.50	22.44	19.15	36.00	22.44	44.93	30.31	45.58	39.56	38.02	47.71
15	7.54	21.35	22.92	19.17	36.39	22.62	45.13	30.60	45.48	39.89	37.59	47.93
16	7.97	21.20	23.41	19.18	36.79	22.79	45.31	30.90	45.34	40.22	37.16	48.12
17	8.39	21.05	23.92	19.19	37.20	22.97	45.47	31.22	45.17	40.54	36.74	48.29
18	8.83	20.90	24.45	19.21	37.62	23.16	45.60	31.55	44.97	40.85	36.35	48.44
19	9.28	20.73	24.98	19.24	38.04	23.37	45.71	31.89	44.76	41.14	35.97	48.59
20	9.75	20.56	25.53	19.28	38.45	23.60	45.77	32.23	44.53	41.41	35.61	48.74
21	10.24	20.39	26.08	19.35	38.83	23.85	45.81	32.55	44.32	41.66	35.27	48.90
22	10.74	20.24	26.61	19.44	39.18	24.11	45.84	32.86	44.13	41.91	34.92	49.08
23	11.27	20.10	27.11	19.55	39.50	24.37	45.87	33.15	43.95	42.15	34.56	49.26
24	11.81	19.97	27.59	19.67	39.79	24.64	45.92	33.43	43.79	42.41	34.18	49.46
25	12.34	19.87	28.05	19.79	40.06	24.89	45.98	33.70	43.64	42.68	33.78	49.65
26	12.87	19.79	28.49	19.90	40.32	25.13	46.05	33.98	43.47	42.96	33.35	49.84
27	13.38	19.72	28.91	20.00	40.59	25.35	46.13	34.27	43.29	43.25	32.90	50.02
28	13.87	19.67	29.34	20.09	40.89	25.56	46.21	34.57	43.08	43.55	32.44	50.19
29	14.33	19.61	29.79	20.18	41.20	25.79	46.28	34.90	42.84	43.84	31.97	50.34
30	14.78	19.54	30.26	20.27	41.53	26.02	46.32	35.23	42.58	44.13	31.50	50.48
31	15.23	19.46			41.86	26.27	46.34	35.58	42.30	44.41	31.03	50.59
32	15.69	19.36			42.17	26.54			42.01	44.69		

Mean R.A. 15^h 1^m 26^s.994 Mean Dec. + 87° 31' 32".63 Sec δ 23.164 Tan δ + 23.142

240 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

57 B URSÆ MINORIS. Mag. 7.2

Day.	JULY.		AUGUST.		SEPTEMBER.		OCTOBER.		NOVEMBER.		DECEMBER.	
	R.A.	Dec. N.	R.A.	Dec. N.	R.A.	Dec. N.	R.A.	Dec. N.	R.A.	Dec. N.	R.A.	Dec. N.
	^h _s ^m _s °		^h _s ^m _s °		^h _s ^m _s °		^h _s ^m _s °		^h _s ^m _s °		^h _s ^m _s °	
	15 1 ^s 87 31		15 0 ^s 87 31		15 0 ^s 87 31		15 0 ^s 87 31		15 0 ^s 87 31		15 0 ^s 87 31	
1	31.03	50.59	75.71	52.13	59.80	48.84	46.74	41.59	38.55	31.05	38.46	19.47
2	30.56	50.70	75.24	52.08	59.32	48.70	46.33	41.32	38.40	30.64	38.65	19.11
3	30.11	50.79	74.76	52.05	58.82	48.55	45.92	41.03	38.27	30.23	38.85	18.77
4	29.67	50.89	74.29	52.02	58.31	48.39	45.51	40.71	38.19	29.82	39.05	18.44
5	29.25	50.98	73.79	52.01	57.77	48.20	45.13	40.37	38.13	29.43	39.23	18.12
6	28.84	51.08	73.26	51.99	57.23	48.00	44.79	40.02	38.07	29.05	39.40	17.79
7	28.42	51.18	72.71	51.96	56.70	47.77	44.47	39.65	38.03	28.69	39.57	17.48
8	27.99	51.29	72.13	51.93	56.20	47.53	44.18	39.29	37.97	28.34	39.74	17.16
9	27.54	51.42	71.54	51.87	55.73	47.27	43.91	38.95	{ ^{17 00} _{17 83} }	{ ^{27 00} _{27 65} }	39.90	16.83
10	27.06	51.55	70.96	51.79	55.29	47.01	43.65	38.62	37.75	27.30	40.08	16.51
11	26.55	51.67	70.40	51.68	54.88	46.76	43.39	38.31	37.67	26.95	40.27	16.18
12	26.01	51.77	69.85	51.57	54.47	46.52	43.11	38.02	37.59	26.58	40.46	15.83
13.	25.46	51.84	69.33	51.44	54.06	46.30	42.82	37.73	37.53	26.21	40.71	15.48
14	24.91	51.89	68.82	51.32	53.64	46.08	42.53	37.42	37.48	25.82	40.98	15.14
15	24.38	51.92	68.35	51.21	53.20	45.87	42.23	37.11	37.45	25.43	41.26	14.80
16	23.87	51.94	67.87	51.10	52.76	45.66	41.93	36.78	37.46	25.04	41.57	14.46
17	23.38	51.95	67.39	51.00	52.30	45.44	41.63	36.44	37.48	24.65	41.89	14.15
18	22.91	51.97	66.89	50.92	51.84	45.22	41.35	36.09	37.53	24.26	42.21	13.85
19	22.46	52.00	66.38	50.83	51.37	44.97	41.08	35.72	37.60	23.88	42.52	13.57
20	22.00	52.05	65.85	50.75	50.91	44.71	40.83	35.35	37.68	23.50	42.82	13.30
21	21.53	52.10	65.32	50.65	50.47	44.44	40.61	34.97	37.75	23.14	43.12	13.04
22	21.03	52.16	64.77	50.53	50.04	44.15	40.42	34.58	37.82	22.80	43.38	12.78
23	20.52	52.21	64.22	50.39	49.63	43.85	40.24	34.21	37.88	22.47	43.64	12.50
24	19.99	52.25	63.68	50.25	49.25	43.55	40.08	33.84	37.92	22.13	43.91	12.21
25	19.44	52.28	63.14	50.09	48.88	43.25	39.93	33.49	37.95	21.79	44.19	11.90
26	18.89	52.31	62.62	49.92	48.54	42.95	39.77	33.16	37.98	21.42	44.50	11.59
27	18.34	52.32	62.12	49.73	48.20	42.67	39.60	32.83	38.01	21.04	44.85	11.28
28	17.79	52.31	61.63	49.54	47.87	42.39	39.41	32.50	38.07	20.65	45.23	10.97
29	17.25	52.28	61.17	49.35	47.51	42.12	39.20	32.16	38.16	20.25	45.63	10.69
30	16.72	52.24	60.72	49.17	47.14	41.85	38.98	31.80	38.29	19.85	46.05	10.43
31	16.21	52.19	60.27	49.00	46.74	41.59	38.76	31.44	38.46	19.47	46.46	10.19
32	15.71	52.13	59.80	48.84			38.55	31.05			46.87	9.97

Mean R.A. 15^h 1^m 26^s.994 Mean Dec. + 87° 31' 32".63 Sec δ 23.164 Tan δ + 23.142

APPARENT PLACES OF STARS, 1924. 241

AT UPPER TRANSIT AT GREENWICH.

ε Ursæ Minoris. Mag. 4.4

Day.	JANUARY.		FEBRUARY.		MARCH.		APRIL.		MAY.		JUNE.	
	R.A.	Dec. N.	R.A.	Dec. N.	R.A.	Dec. N.	R.A.	Dec. N.	R.A.	Dec. N.	R.A.	Dec. N.
	^h ^m		^h ^m		^h ^m		^h ^m		^h ^m		^h ^m	
	16 53 82 9		16 53 82 9		16 53 82 9		16 53 82 9		16 53 82 9		16 53 82 9	
	^s		^s		^s		^s		^s		^s	
1	32.51	53.07	35.57	44.22	40.01	40.44	44.91	42.37	48.26	49.28	49.30	58.98
2	32.56	52.76	35.69	43.98	40.18	40.38	45.06	42.53	48.33	49.59	49.28	59.32
3	32.62	52.44	35.83	43.73	40.35	40.33	45.21	42.72	48.40	49.91	49.26	59.65
4	32.66	52.11	35.97	43.50	40.53	40.29	45.36	42.91	48.47	50.23	49.23	59.95
5	32.72	51.75	36.12	43.27	40.70	40.27	45.49	43.12	48.53	50.54	49.21	60.25
6	32.78	51.39	36.27	43.07	40.88	40.26	45.62	43.33	48.59	50.84	49.19	60.53
7	32.86	51.03	36.43	42.88	41.05	40.28	45.75	43.54	48.64	51.15	49.17	60.81
8	32.94	50.68	36.58	42.71	41.22	40.32	45.87	43.75	48.70	51.44	49.14	61.09
9	33.03	50.34	36.74	42.56	41.38	40.37	45.99	43.96	48.76	51.71	49.12	61.38
10	33.12	50.00	36.89	42.42	41.55	40.41	46.11	44.16	48.81	51.98	49.10	61.68
11	33.21	49.70	37.04	42.29	41.71	40.46	46.23	44.36	48.86	52.26	49.07	62.00
12	33.31	49.41	37.19	42.16	41.87	40.51	46.35	44.54	48.92	52.54	49.03	62.34
13	33.41	49.12	37.33	42.03	42.02	40.56	46.47	44.73	48.97	52.83	48.99	62.69
14	33.50	48.85	37.47	41.90	42.17	40.60	46.59	44.92	49.02	53.14	48.94	63.03
15	33.60	48.58	37.62	41.76	42.32	40.63	46.71	45.12	49.07	53.47	48.89	63.36
16	33.70	48.31	37.76	41.62	42.48	40.66	46.83	45.34	49.10	53.81	48.83	63.67
17	33.79	48.03	37.92	41.47	42.65	40.69	46.95	45.59	49.14	54.16	48.76	63.96
18	33.89	47.75	38.08	41.32	42.81	40.73	47.07	45.85	49.16	54.50	48.69	64.23
19	33.99	47.47	38.25	41.18	42.98	40.79	47.17	46.12	49.17	54.84	48.63	64.49
20	34.09	47.17	38.42	41.05	43.14	40.88	47.27	46.40	49.19	55.16	48.57	64.74
21	34.20	46.87	38.59	40.94	43.31	40.99	47.36	46.68	49.20	55.47	48.52	65.00
22	34.31	46.57	38.76	40.85	43.47	41.12	47.44	46.95	49.21	55.76	48.46	65.28
23	34.43	46.28	38.93	40.78	43.63	41.26	47.53	47.21	49.23	56.04	48.40	65.57
24	34.56	46.00	39.09	40.73	43.77	41.40	47.62	47.45	49.25	56.33	48.34	65.86
25	34.69	45.73	39.25	40.70	43.90	41.54	47.71	47.68	49.27	56.63	48.28	66.16
26	34.82	45.49	39.40	40.67	44.04	41.67	47.80	47.91	49.29	56.93	48.21	66.47
27	34.96	45.27	39.56	40.63	44.18	41.79	47.89	48.15	49.30	57.25	48.13	66.78
28	35.09	45.06	39.70	40.58	44.32	41.89	47.99	48.41	49.31	57.59	48.05	67.08
29	35.21	44.87	39.85	40.51	44.47	41.99	48.09	48.68	49.32	57.94	47.96	67.37
30	35.33	44.67	40.01	40.44	44.61	42.10	48.18	48.97	49.32	58.29	47.86	67.65
31	35.44	44.45			44.76	42.23	48.26	49.28	49.31	58.64	47.76	67.92
32	35.57	44.22			44.91	42.37			49.30	58.98		

242 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

 ϵ Ursæ Minoris. Mag. 4.4

Day.	JULY.		AUGUST.		SEPTEMBER.		OCTOBER.		NOVEMBER.		DECEMBER.	
	R.A.	Dec. N.	R.A.	Dec. N.	R.A.	Dec. N.	R.A.	Dec. N.	R.A.	Dec. N.	R.A.	Dec. N.
	h m	^s	h m	^s	h m	^s	h m	^s	h m	^s	h m	^s
	16 53	82 10	16 53	82 10	16 53	82 10	16 53	82 10	16 53	82 9	16 53	82 9
1	47.76	7.92	44.02	14.32	38.95	16.52	33.72	14.21	29.17	67.35	26.76	57.28
2	47.66	8.16	43.88	14.43	38.78	16.53	33.55	14.09	29.04	67.04	26.72	56.98
3	47.57	8.40	43.74	14.55	38.61	16.55	33.37	13.95	28.93	66.71	26.70	56.60
4	47.47	8.63	43.60	14.69	38.43	16.58	33.19	13.79	28.82	66.38	26.68	56.23
5	47.39	8.85	43.46	14.84	38.25	16.60	33.02	13.61	28.72	66.04	26.66	55.88
6	47.30	9.07	43.32	15.00	38.05	16.59	32.85	13.40	28.62	65.72	$\left\{ \begin{smallmatrix} 26.65 \\ 26.64 \end{smallmatrix} \right\}$	$\left\{ \begin{smallmatrix} 55.53 \\ 55.19 \end{smallmatrix} \right\}$
7	47.21	9.31	43.16	15.15	37.86	16.56	32.69	13.18	28.52	65.41	26.62	54.85
8	47.12	9.56	42.99	15.30	37.67	16.50	32.53	12.96	28.43	65.11	26.60	54.52
9	47.03	9.82	42.82	15.44	37.48	16.42	32.38	12.74	28.34	64.82	26.58	54.17
10	46.92	10.09	42.65	15.56	37.31	16.33	32.23	12.54	28.24	64.54	26.56	53.81
11	46.81	10.37	42.47	15.65	37.14	16.25	32.08	12.34	28.15	64.25	26.54	53.45
12	46.69	10.63	42.30	15.72	36.98	16.17	31.94	12.16	28.05	63.96	26.53	53.07
13	46.57	10.88	42.14	15.78	36.81	16.10	31.80	11.98	27.95	63.66	26.53	52.69
14	46.43	11.10	41.98	15.83	36.64	16.03	31.65	11.80	27.85	63.35	26.53	52.30
15	46.30	11.30	41.82	15.88	36.47	15.98	31.50	11.61	27.75	63.02	26.54	51.91
16	46.17	11.47	41.67	15.94	36.30	15.93	31.34	11.42	27.67	62.67	26.56	51.51
17	46.05	11.64	41.51	16.01	36.12	15.88	31.18	11.21	27.59	62.32	26.58	51.13
18	45.92	11.82	41.35	16.09	35.95	15.82	31.03	10.98	27.51	61.95	26.62	50.75
19	45.81	12.00	41.19	16.18	35.76	15.76	30.87	10.75	27.45	61.58	26.65	50.40
20	45.69	12.19	41.02	16.27	35.58	15.67	30.73	10.49	27.39	61.21	26.68	50.06
21	45.57	12.40	40.85	16.35	35.39	15.57	30.59	10.22	27.33	60.84	26.71	49.74
22	45.45	12.61	40.67	16.43	35.21	15.45	30.45	9.94	27.27	60.50	26.73	49.41
23	45.33	12.82	40.49	16.49	35.03	15.32	30.32	9.66	27.22	60.17	26.75	49.08
24	45.19	13.03	40.31	16.53	34.86	15.17	30.20	9.39	27.16	59.86	26.76	48.73
25	45.06	13.24	40.13	16.57	34.70	15.01	30.08	9.12	27.10	59.56	26.78	48.37
26	44.91	13.43	39.96	16.59	34.54	14.85	29.96	8.86	27.03	59.25	26.81	48.00
27	44.76	13.62	39.78	16.58	34.38	14.71	29.84	8.61	26.97	58.91	26.85	47.61
28	44.61	13.79	39.61	16.57	34.22	14.57	29.71	8.38	26.90	58.56	26.90	47.22
29	44.46	13.94	39.44	16.54	34.06	14.44	29.57	8.15	26.85	58.18	26.96	46.84
30	44.31	14.08	39.28	16.52	33.89	14.32	29.44	7.90	26.80	57.78	27.02	46.48
31	44.17	14.20	39.11	16.51	33.72	14.21	29.31	7.64	26.76	57.38	27.09	46.12
32	44.02	14.32	38.95	16.52			29.17	7.35			27.16	45.78

Mean R.A. 16^h 53^m 41^s.806 Mean Dec. + 82° 9' 52".93 Sec δ 7.335 Tan δ + 7.267

APPARENT PLACES OF STARS, 1924. 243

AT UPPER TRANSIT AT GREENWICH.

δ Ursæ Minoris. Mag. 4.4

Day.	JANUARY.		FEBRUARY.		MARCH.		APRIL.		MAY.		JUNE.	
	R.A.	Dec. N.	R.A.	Dec. N.	R.A.	Dec. N.	R.A.	Dec. N.	R.A.	Dec. N.	R.A.	Dec. N.
	h m		h m		h m		h m		h m		h m	
	17 56	86 36	17 56	86 36	17 56	86 36	17 56	86 36	17 56	86 36	17 57	86 36
1	24.78	55.28	28.62	45.48	37.21	39.65	48.49	38.93	57.75	43.74	2.57	52.46
2	24.78	54.96	28.82	45.20	37.55	39.50	48.88	39.00	58.01	43.99	2.62	52.79
3	24.78	54.65	29.04	44.90	37.91	39.36	49.26	39.09	58.26	44.26	2.65	53.12
4	24.79	54.31	29.27	44.61	38.29	39.24	49.63	39.20	58.49	44.53	2.67	53.44
5	24.79	53.96	29.53	44.32	38.67	39.12	50.00	39.33	58.72	44.79	2.69	53.74
6	24.81	53.60	29.80	44.05	39.06	39.02	50.35	39.47	58.93	45.06	2.70	54.03
7	24.85	53.23	30.09	43.79	39.45	38.95	50.69	39.60	59.12	45.32	2.72	54.31
8	24.91	52.86	30.39	43.55	39.83	38.89	51.02	39.74	59.31	45.58	2.75	54.60
9	24.99	52.49	30.69	43.32	40.21	38.85	51.33	39.88	59.49	45.82	2.78	54.88
10	25.10	52.14	30.99	43.11	40.58	38.82	51.64	40.01	59.67	46.05	2.82	55.18
11	25.22	51.79	31.28	42.91	40.93	38.78	51.95	40.13	59.86	46.29	2.85	55.49
12	25.34	51.46	31.56	42.72	41.29	38.75	52.26	40.26	60.06	46.53	2.86	55.83
13	25.46	51.15	31.84	42.52	41.63	38.71	52.57	40.37	60.26	46.77	2.85	56.18
14	25.59	50.85	32.11	42.32	41.98	38.67	52.89	40.48	60.46	47.03	2.83	56.54
15	25.72	50.55	32.39	42.12	42.33	38.62	53.22	40.60	60.66	47.32	2.78	56.88
16	25.84	50.24	32.67	41.91	42.68	38.56	53.56	40.74	60.84	47.63	2.71	57.22
17	25.95	49.94	32.96	41.69	43.04	38.51	53.90	40.90	61.00	47.94	2.63	57.53
18	26.07	49.64	33.25	41.47	43.42	38.47	54.23	41.08	61.14	48.26	2.54	57.84
19	26.19	49.32	33.56	41.25	43.81	38.44	54.54	41.29	61.26	48.58	2.45	58.12
20	26.32	49.00	33.90	41.04	44.21	38.43	54.84	41.51	61.36	48.89	2.38	58.41
21	26.46	48.67	34.24	40.84	44.61	38.44	55.11	41.74	61.45	49.18	2.32	58.69
22	26.61	48.33	34.59	40.66	44.99	38.47	55.36	41.95	61.53	49.45	2.27	58.98
23	26.79	47.98	34.95	40.51	45.37	38.53	55.60	42.16	61.63	49.71	2.22	59.28
24	26.99	47.65	35.30	40.38	45.72	38.60	55.85	42.35	61.74	49.97	2.17	59.59
25	27.20	47.34	35.64	40.27	46.07	38.66	56.09	42.52	61.87	50.24	2.11	59.92
26	27.42	47.04	35.97	40.17	46.39	38.71	56.35	42.70	61.99	50.52	2.03	60.25
27	27.64	46.77	36.28	40.06	46.71	38.75	56.62	42.88	62.12	50.82	1.93	60.59
28	27.85	46.51	36.58	39.94	47.04	38.78	56.90	43.07	62.24	51.13	1.82	60.93
29	28.06	46.26	36.89	39.80	47.38	38.81	57.19	43.27	62.35	51.46	1.69	61.26
30	28.25	46.01	37.21	39.65	47.74	38.84	57.47	43.50	62.44	51.79	1.55	61.58
31	28.43	45.75			48.11	38.88	57.75	43.74	62.51	52.13	1.40	61.88
32	28.62	45.48			48.49	38.93			62.57	52.46		

Mean R.A. 17^h 56^m 44^s.830 Mean Dec. + 86° 36' 50".21 Sec δ 16.931 Tan δ + 16.901

R 2

244 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

δ Ursæ Minoris. Mag. 4.4

Day.	JULY.		AUGUST.		SEPTEMBER.		OCTOBER.		NOVEMBER.		DECEMBER.	
	R.A.	Dec. N.	R.A.	Dec. N.	R.A.	Dec. N.	R.A.	Dec. N.	R.A.	Dec. N.	R.A.	Dec. N.
	^h ^m		^h ^m		^h ^m		^h ^m		^h ^m		^h ^m	
	17 56	86° 37'	17 56	86° 37'	17 56	86° 37'	17 56	86° 37'	17 56	86° 37'	17 56	86° 36'
1	^s 61.40	1.88	^s 54.55	10.06	^s 43.60	14.95	^s 31.07	15.66	^s 18.63	11.75	^s 9.98	63.83
2	61.25	2.17	54.26	10.25	43.23	15.06	30.63	15.65	18.24	11.54	9.78	63.48
3	61.09	2.45	53.99	10.44	42.85	15.18	30.18	15.62	17.86	11.30	9.61	63.13
4	60.93	2.72	53.71	10.64	42.44	15.29	29.73	15.56	17.50	11.05	9.45	62.79
5	60.79	2.99	53.43	10.86	42.01	15.41	29.27	15.49	17.17	10.80	9.30	62.46
6	60.65	3.25	53.14	11.08	41.57	15.51	28.81	15.39	16.86	10.55	9.16	62.15
7	60.50	3.52	52.83	11.32	41.12	15.59	28.37	15.28	16.56	10.30	9.01	61.85
8	60.36	3.80	52.49	11.56	40.66	15.64	27.95	15.15	16.26	10.07	8.87	61.55
9	60.21	4.10	52.14	11.78	40.23	15.67	27.55	15.03	15.97	9.86	8.72	61.25
10	60.05	4.41	51.77	11.99	39.80	15.68	27.16	14.92	15.67	9.65	8.56	60.95
11	59.86	4.73	51.39	12.18	39.39	15.70	26.77	14.82	15.35	9.44	8.40	60.63
12	59.66	5.05	51.01	12.34	38.99	15.71	26.39	14.73	15.04	9.22	8.25	60.30
13	59.43	5.36	50.64	12.49	38.60	15.74	26.01	14.64	14.72	8.99	8.10	59.95
14	59.19	5.65	50.28	12.62	38.21	15.78	25.61	14.55	14.40	8.76	7.96	59.59
15	58.94	5.92	49.94	12.75	37.81	15.83	25.20	14.46	14.08	8.50	7.84	59.23
16	58.69	6.17	49.62	12.90	37.40	15.87	24.79	14.36	13.77	8.23	7.74	58.86
17	58.45	6.40	49.29	13.06	36.99	15.91	24.38	14.25	13.47	7.94	7.66	58.49
18	58.22	6.63	48.96	13.23	36.56	15.95	23.96	14.12	13.18	7.64	7.60	58.13
19	58.01	6.86	48.61	13.40	36.13	15.99	23.54	13.98	12.90	7.34	7.54	57.76
20	57.79	7.11	48.25	13.57	35.69	16.01	23.13	13.82	12.65	7.03	{ 7.49 }	{ 57.41 }
21	57.58	7.37	47.89	13.74	35.25	16.01	22.73	13.65	12.42	6.73	7.39	56.76
22	57.36	7.63	47.52	13.91	34.79	16.00	22.34	13.47	12.19	6.44	7.34	56.45
23	57.13	7.90	47.12	14.07	34.35	15.97	21.95	13.28	11.97	6.16	7.27	56.13
24	56.88	8.18	46.72	14.21	33.91	15.94	21.59	13.09	11.74	5.90	7.19	55.86
25	56.62	8.46	46.32	14.34	33.49	15.89	21.24	12.90	11.50	5.64	7.11	55.46
26	56.35	8.72	45.91	14.45	33.08	15.83	20.89	12.73	11.24	5.38	7.05	55.16
27	56.07	8.98	45.50	14.54	32.68	15.78	20.54	12.57	10.98	5.11	7.00	54.77
28	55.77	9.23	45.11	14.62	32.28	15.73	20.18	12.43	10.72	4.82	6.98	54.34
29	55.47	9.46	44.72	14.70	31.89	15.70	19.81	12.28	10.46	4.50	6.99	53.91
30	55.16	9.67	44.35	14.77	31.48	15.68	19.43	12.12	10.21	4.17	7.02	53.51
31	54.85	9.87	43.97	14.85	31.07	15.66	19.03	11.94	9.98	3.83	7.06	53.21
32	54.55	10.06	43.60	14.95			18.63	11.75			7.11	52.86

Mean R.A. 17^h 56^m 44^s.830 Mean Dec. + 86° 36' 50".21 Sec δ 16.931 Tan δ + 16.901

APPARENT PLACES OF STARS, 1924. 245

AT UPPER TRANSIT AT GREENWICH.

λ Ursæ Minoris. Mag. 6.6

Day.	JANUARY.		FEBRUARY.		MARCH.		APRIL.		MAY.		JUNE.	
	R.A.	Dec. N.	R.A.	Dec. N.	R.A.	Dec. N.	R.A.	Dec. N.	R.A.	Dec. N.	R.A.	Dec. N.
	^h ^m 18 53 89 [°] 1	^h ^m 18 53 89 [°] 1	^h ^m 18 53 89 [°] 1	^h ^m 18 53 89 [°] 1	^h ^m 18 53 89 [°] 1	^h ^m 18 53 89 [°] 1	^h ^m 18 54 89 [°] 1	^h ^m 18 54 89 [°] 1	^h ^m 18 54 89 [°] 1	^h ^m 18 54 89 [°] 1	^h ^m 18 55 89 [°] 1	^h ^m 18 55 89 [°] 1
1	8.55	47.13	11.33	36.69	34.31	29.31	11.21	26.19	46.50	28.79	10.44	36.09
2	8.29	46.82	11.69	36.38	35.30	29.09	12.57	26.18	47.61	28.97	10.88	36.40
3	{ 7.98 } { 7.64 }	{ 46.53 } { 46.23 }	12.11	36.06	36.35	28.88	13.93	26.19	48.68	29.16	11.26	36.70
4	7.29	45.91	12.62	35.73	37.48	28.67	15.29	26.21	49.69	29.37	11.60	37.00
5	6.93	45.58	13.21	35.40	38.67	28.47	16.62	26.25	50.66	29.58	11.91	37.28
6	6.62	45.23	13.87	35.08	39.90	28.30	17.91	26.30	51.58	29.79	12.21	37.56
7	6.37	44.88	14.60	34.77	41.14	28.15	19.17	26.35	52.45	30.00	12.53	37.83
8	6.22	44.51	15.37	34.47	42.38	28.02	20.39	26.41	53.30	30.20	12.88	38.10
9	6.16	44.15	16.15	34.20	43.60	27.90	21.57	26.47	54.12	30.39	13.25	38.37
10	6.17	43.78	16.93	33.94	44.79	27.79	22.72	26.53	54.94	30.58	13.63	38.65
11	6.24	43.43	17.71	33.68	45.96	27.68	23.85	26.59	55.79	30.76	14.02	38.94
12	6.34	43.09	18.47	33.44	47.10	27.57	24.97	26.63	56.67	30.95	14.39	39.26
13	6.46	42.76	19.21	33.20	48.21	27.46	26.12	26.67	57.58	31.14	14.70	39.60
14	6.58	42.45	19.93	32.95	49.31	27.34	27.30	26.71	58.52	31.34	14.91	39.95
15	6.69	42.14	20.65	32.70	50.41	27.22	28.52	26.76	59.45	31.57	15.04	40.30
16	6.78	41.82	21.37	32.43	51.52	27.09	29.78	26.82	60.34	31.82	15.07	40.64
17	6.87	41.50	22.10	32.16	52.68	26.96	31.07	26.90	61.16	32.09	15.05	40.96
18	6.95	41.19	22.87	31.89	53.89	26.83	32.35	27.01	61.90	32.37	15.02	41.26
19	7.02	40.87	23.71	31.61	55.16	26.72	33.59	27.14	62.55	32.66	14.99	41.55
20	7.10	40.53	24.62	31.34	56.49	26.63	34.76	27.29	63.12	32.93	14.99	41.83
21	7.22	40.18	25.59	31.07	57.84	26.57	35.85	27.44	63.66	33.19	15.04	42.11
22	7.40	39.82	26.63	30.83	59.18	26.52	36.88	27.59	64.20	33.43	15.13	42.40
23	7.66	39.46	27.69	30.61	60.48	26.49	37.86	27.73	64.77	33.66	15.24	42.70
24	8.00	39.11	28.74	30.41	61.72	26.46	38.82	27.86	65.39	33.89	15.34	43.01
25	8.43	38.76	29.75	30.22	62.89	26.44	39.80	27.98	66.04	34.12	15.42	43.34
26	8.90	38.43	30.71	30.05	64.02	26.43	40.83	28.09	66.73	34.36	15.47	43.68
27	9.38	38.12	31.62	29.88	65.12	26.40	41.91	28.20	67.44	34.62	15.45	44.03
28	9.85	37.83	32.50	29.70	66.23	26.36	43.04	28.32	68.13	34.89	15.37	44.38
29	10.28	37.54	33.38	29.51	67.39	26.31	44.19	28.46	68.78	35.18	15.24	44.72
30	10.67	37.26	34.31	29.31	68.61	26.26	45.35	28.62	69.38	35.48	15.04	45.06
31	11.01	36.98			69.88	26.22	46.50	28.79	69.94	35.79	14.80	45.39
32	11.33	36.69			71.21	26.19			70.44	36.09		

Mean R.A. 18^h 54^m 9^s.948 Mean Dec. + 89° 1' 37".59 Sec δ 58.895 Tan δ + 58.887

246 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

 λ Ursæ Minoris. Mag. 6.6

Day.	JULY.		AUGUST.		SEPTEMBER.		OCTOBER.		NOVEMBER.		DECEMBER.	
	R.A.	Dec. N.	R.A.	Dec. N.	R.A.	Dec. N.	R.A.	Dec. N.	R.A.	Dec. N.	R.A.	Dec. N.
	^h ^m 18 54 89 I		^h ^m 18 54 89 I		^h ^m 18 53 89 2		^h ^m 18 52 89 2		^h ^m 18 52 89 I		^h ^m 18 51 89 I	
1	74.80	45.39	58.83	54.75	85.97	1.85	103.78	5.30	57.39	64.32	79.93	58.65
2	74.52	45.69	58.01	55.00	84.81	2.03	102.27	5.38	55.82	64.20	78.90	58.37
3	74.22	45.99	57.23	55.24	83.61	2.23	100.70	5.46	54.29	64.06	77.96	58.08
4	73.92	46.29	56.48	55.49	82.34	2.44	99.06	5.51	52.83	63.89	77.11	57.79
5	73.65	46.58	55.73	55.76	80.99	2.64	97.40	5.53	51.45	63.72	76.29	57.51
6	73.41	46.87	54.95	56.04	79.55	2.83	95.74	5.54	50.15	63.55	75.50	57.25
7	73.19	47.16	54.12	56.33	78.06	3.00	94.13	5.53	48.89	63.39	74.72	57.00
8	72.99	47.47	53.20	56.63	76.55	3.15	92.58	5.51	47.67	63.24	73.92	56.74
9	72.78	47.80	52.19	56.93	75.05	3.28	91.10	5.48	46.44	63.10	73.09	56.49
10	72.52	48.13	51.11	57.22	73.60	3.39	89.67	5.45	45.19	62.96	72.25	56.24
11	72.17	48.47	49.97	57.48	72.20	3.49	88.27	5.43	43.92	62.82	71.40	55.97
12	71.75	48.82	48.82	57.72	70.86	3.59	86.88	5.42	42.62	62.68	70.54	55.69
13	71.23	49.17	47.70	57.94	69.56	3.71	85.48	5.43	41.30	62.54	69.69	55.40
14	70.63	49.50	46.61	58.15	68.27	3.83	84.04	5.44	39.97	62.38	68.86	55.09
15	69.99	49.81	45.57	58.36	66.97	3.96	82.57	5.43	38.62	62.20	68.07	54.76
16	69.35	50.10	44.57	58.57	65.65	4.10	81.07	5.42	37.28	62.01	67.34	54.43
17	68.75	50.38	43.60	58.79	64.28	4.24	79.54	5.40	35.96	61.80	66.68	54.09
18	68.19	50.65	42.62	59.02	62.86	4.38	77.98	5.38	34.68	61.58	66.09	53.75
19	67.67	50.92	41.62	59.26	61.40	4.50	76.41	5.34	33.46	61.35	65.57	53.42
20	67.18	51.19	40.59	59.50	59.90	4.62	74.84	5.28	32.29	61.11	65.09	53.10
21	66.71	51.48	39.50	59.75	58.36	4.72	73.27	5.21	31.19	60.87	64.64	52.79
22	66.22	51.79	38.36	60.00	56.82	4.80	71.74	5.13	30.14	60.65	64.16	52.51
23	65.69	52.11	37.16	60.24	55.27	4.87	70.26	5.02	29.12	60.44	63.64	52.24
24	65.10	52.42	35.93	60.46	53.73	4.93	68.84	4.92	28.08	60.25	63.07	51.97
25	64.46	52.75	34.66	60.67	52.23	4.97	67.46	4.83	27.00	60.06	62.46	51.68
26	63.77	53.06	33.37	60.86	50.77	5.01	66.12	4.75	25.86	59.87	61.83	51.36
27	63.02	53.37	32.06	61.04	49.35	5.04	64.79	4.67	24.68	59.66	61.21	51.02
28	62.23	53.67	30.77	61.21	47.97	5.08	63.42	4.61	23.46	59.44	60.66	50.66
29	61.39	53.96	29.52	61.36	46.61	5.14	62.00	4.55	22.24	59.20	60.20	50.29
30	60.53	54.23	28.31	61.52	45.22	5.21	60.51	4.49	21.05	58.93	59.84	49.92
31	59.68	54.50	27.13	61.68	43.78	5.30	58.97	4.41	19.93	58.65	59.57	49.56
32	58.83	54.75	25.97	61.85			57.39	4.32			59.37	49.22

Mean R.A. 18^h 54^m 9^s.948 Mean Dec. + 89° 1' 37".59 Sec δ 58.895 Tan δ + 58.887

APPARENT PLACES OF STARS, 1924. 247

AT UPPER TRANSIT AT GREENWICH.

B.A.C. 7504. Mag. 7.4												
Day.	JANUARY.		FEBRUARY.		MARCH.		APRIL.		MAY.		JUNE.	
	R.A.	Dec. N.	R.A.	Dec. N.	R.A.	Dec. N.	R.A.	Dec. N.	R.A.	Dec. N.	R.A.	Dec. N.
	^h ^m		^h ^m		^h ^m		^h ^m		^h ^m		^h ^m	
	21 14	86 43	21 14	86 43	21 14	86 43	21 14	86 43	21 14	86 43	21 15	86 43
	^s		^s		^s		^s		^s		^s	
1	40.66	46.97	34.70	38.24	35.39	28.46	42.42	20.52	52.87	17.60	3.75	20.29
2	40.41	46.76	34.60	37.94	35.49	28.14	42.74	20.32	53.27	17.60	4.07	20.50
3	40.15	46.55	34.48	37.63	35.61	27.81	43.07	20.13	53.66	17.61	4.37	20.70
4	39.87	46.36	34.37	37.30	35.75	27.48	43.42	19.95	54.05	17.64	4.65	20.90
5	39.58	46.16	{ ^{34 27} _{34 20} }	{ ^{36 95} _{36 58} }	35.92	27.15	43.77	19.79	54.44	17.68	4.93	21.10
6	39.28	45.94	34.15	36.21	36.10	26.84	44.12	19.64	54.82	17.72	5.20	21.28
7	38.98	45.70	34.13	35.86	36.30	26.53	44.48	19.51	55.17	17.76	5.46	21.46
8	38.69	45.43	34.13	35.51	36.51	26.23	44.82	19.38	55.52	17.80	5.73	21.63
9	38.41	45.14	34.13	35.17	36.73	25.95	45.15	19.26	55.85	17.84	6.00	21.81
10	38.16	44.84	34.15	34.82	36.94	25.69	45.48	19.15	56.18	17.88	6.29	21.99
11	37.93	44.54	34.17	34.50	37.16	25.43	45.79	19.03	56.51	17.91	6.58	22.19
12	37.72	44.25	34.19	34.18	37.37	25.17	46.10	18.91	56.85	17.94	6.88	22.40
13	37.53	43.95	34.22	33.88	37.58	24.92	46.42	18.77	57.21	17.97	7.19	22.63
14	37.34	43.67	34.23	33.57	37.77	24.67	46.73	18.64	57.58	18.02	7.48	22.88
15	37.16	43.40	34.24	33.26	37.96	24.40	47.07	18.50	57.96	18.07	7.75	23.15
16	36.99	43.12	34.24	32.95	38.16	24.13	47.42	18.37	58.36	18.15	7.99	23.44
17	36.81	42.84	34.25	32.62	38.36	23.85	47.79	18.25	58.74	18.26	8.22	23.72
18	36.63	42.57	34.27	32.28	38.57	23.58	48.17	18.15	59.11	18.39	8.42	23.99
19	36.45	42.31	34.29	31.93	38.80	23.30	48.57	18.08	59.46	18.54	8.62	24.24
20	36.25	42.03	34.33	31.56	39.06	23.03	48.96	18.03	59.80	18.69	8.81	24.48
21	36.05	41.74	34.40	31.19	39.34	22.77	49.33	18.00	60.11	18.83	9.02	24.71
22	35.86	41.43	34.50	30.84	39.64	22.54	49.69	17.98	60.41	18.96	9.23	24.94
23	35.68	41.10	34.61	30.51	39.95	22.33	50.03	17.96	60.71	19.07	9.46	25.18
24	35.50	40.76	34.74	30.19	40.25	22.13	50.35	17.93	61.02	19.18	9.71	25.43
25	35.35	40.42	34.87	29.89	40.54	21.95	50.67	17.88	61.33	19.27	9.95	25.69
26	35.22	40.07	34.99	29.61	40.81	21.77	51.00	17.83	61.66	19.36	10.20	25.97
27	35.11	39.74	35.10	29.34	41.06	21.59	51.35	17.77	62.01	19.48	10.43	26.26
28	35.03	39.41	35.21	29.06	41.31	21.39	51.71	17.70	62.37	19.62	10.65	26.56
29	34.96	39.10	35.30	28.77	41.56	21.18	52.09	17.65	62.73	19.76	10.85	26.87
30	34.88	38.81	35.39	28.46	41.83	20.96	52.48	17.62	63.08	19.92	11.03	27.18
31	34.80	38.53			42.12	20.74	52.87	17.60	63.42	20.10	11.20	27.49
32	34.70	38.24			42.42	20.52			63.75	20.26		

248 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

B.A.C. 7504. Mag. 7.4

Day.	JULY.		AUGUST.		SEPTEMBER.		OCTOBER.		NOVEMBER.		DECEMBER.	
	R.A.	Dec. N.	R.A.	Dec. N.	R.A.	Dec. N.	R.A.	Dec. N.	R.A.	Dec. N.	R.A.	Dec. N.
	^h ^m	^s	^h ^m	^s	^h ^m	^s	^h ^m	^s	^h ^m	^s	^h ^m	^s
	21 15	86 43	21 15	86 43	21 15	86 43	21 14	86 43	21 14	86 44	21 14	86 43
1	11.20	27.49	13.76	37.69	10.69	48.41	62.94	57.40	51.25	3.29	38.64	64.09.
2	11.35	27.80	13.73	38.00	10.54	48.73	62.63	57.69	50.80	3.42	38.20	64.00
3	11.49	28.10	13.71	38.31	10.38	49.07	62.31	57.98	50.34	3.53	37.79	63.90
4	11.62	28.39	13.70	38.64	10.21	49.42	61.96	58.25	49.90	3.62	37.39	63.78
5	11.74	28.67	13.70	38.98	10.02	49.79	61.59	58.51	49.45	3.68	37.01	63.67
6	11.88	28.95	13.71	39.33	9.81	50.15	61.20	58.75	49.02	3.72	36.65	63.57
7	12.02	29.23	13.71	39.70	9.58	50.51	60.81	58.97	48.61	3.77	36.29	63.47
8	12.18	29.51	13.69	40.08	9.33	50.85	60.43	59.18	48.22	3.82	35.93	63.38
9	12.34	29.80	13.65	40.48	9.07	51.17	60.05	59.37	47.83	3.88	35.58	63.29
10	12.51	30.12	13.58	40.88	8.80	51.48	59.69	59.56	47.45	3.96	35.21	63.20
11	12.66	30.46	13.49	41.26	8.53	51.77	59.35	59.75	47.06	4.04	34.83	63.11
12	12.80	30.82	13.38	41.63	8.28	52.04	59.01	59.95	46.66	4.11	34.44	63.01
13	12.91	31.18	13.26	41.98	8.04	52.32	58.67	60.16	46.25	4.18	34.04	62.89
14	13.00	31.55	13.14	42.32	7.81	52.62	58.33	60.37	45.83	4.25	33.65	62.75
15	13.07	31.91	13.03	42.64	7.58	52.92	57.99	60.59	45.40	4.31	33.25	62.60
16	13.12	32.25	12.94	42.96	7.35	53.22	57.63	60.80	44.96	4.34	32.86	62.43
17	13.17	32.57	12.85	43.28	7.11	53.53	57.25	61.01	44.51	4.35	32.48	62.24
18	13.22	32.88	12.77	43.61	6.86	53.85	56.87	61.21	44.06	4.35	32.12	62.04
19	13.28	33.18	12.69	43.96	6.60	54.17	56.46	61.40	43.62	4.34	31.78	61.86
20	13.35	33.49	12.60	44.32	6.32	54.48	56.05	61.57	43.18	4.31	31.45	61.67
21	13.43	33.80	12.51	44.68	6.03	54.79	55.63	61.73	42.76	4.28	31.15	61.49
22	13.52	34.13	12.40	45.05	5.72	55.09	55.21	61.88	42.35	4.24	30.85	61.32
23	13.60	34.47	12.28	45.43	5.41	55.37	54.80	62.02	41.96	4.22	30.54	61.16
24	13.68	34.83	12.14	45.80	5.08	55.64	54.39	62.15	41.58	4.20	30.22	61.01
25	13.74	35.19	11.99	46.16	4.75	55.89	53.99	62.27	41.21	4.20	29.88	60.85
26	13.79	35.56	11.81	46.51	4.42	56.13	53.61	62.40	40.82	4.21	29.53	60.69
27	13.83	35.92	11.62	46.84	4.10	56.37	53.24	62.53	40.41	4.22	29.17	60.50
28	13.84	36.29	11.43	47.16	3.80	56.61	52.87	62.67	39.98	4.22	28.82	60.29
29	13.83	36.65	11.23	47.48	3.51	56.86	52.49	62.83	39.54	4.20	28.47	60.05
30	13.82	37.01	11.04	47.79	3.23	57.12	52.09	62.99	39.09	4.16	28.15	59.80
31	13.79	37.36	10.86	48.09	2.94	57.40	51.68	63.15	38.64	4.09	27.84	59.54
32	13.76	37.69	10.69	48.41			51.25	63.29			27.56	59.28

Mean R.A. 21^h 14^m 49^s.476 Mean Dec. + 86° 43' 30".34 Sec δ 17.505 Tan δ + 17.476

APPARENT PLACES OF STARS, 1924. 249

AT UPPER TRANSIT AT GREENWICH.

39 H Cephei. Mag. 5.6

Day.	JANUARY.		FEBRUARY.		MARCH.		APRIL.		MAY.		JUNE.	
	R.A.	Dec. N.	R.A.	Dec. N.	R.A.	Dec. N.	R.A.	Dec. N.	R.A.	Dec. N.	R.A.	Dec. N.
	h m	°	h m	°	h m	°	h m	°	h m	°	h m	°
	23 27	86 53	23 27	86 53	23 27	86 53	23 27	86 53	23 27	86 53	23 27	86 53
	s	"	s	"	s	"	s	"	s	"	s	"
1	45.50	35.79	34.55	31.37	28.82	23.25	29.58	13.07	36.79	5.81	48.08	3.14
2	45.14	35.73	34.26	31.18	28.70	22.95	29.72	12.75	37.14	5.62	48.49	3.17
3	44.79	35.69	33.96	30.97	28.58	22.63	29.89	12.43	37.49	5.46	48.88	3.21
4	44.41	35.65	33.64	30.74	28.46	22.29	30.09	12.11	37.85	5.30	49.27	3.25
5	44.02	35.62	33.33	30.49	28.37	21.95	30.29	11.82	38.21	5.17	49.64	3.29
6	43.62	35.58	33.03	30.22	28.29	21.59	30.50	11.54	38.56	5.04	50.00	3.33
7	43.20	35.51	32.74	29.94	28.24	21.24	30.72	11.26	38.91	4.92	50.35	3.36
8	42.77	35.43	32.48	29.65	28.21	20.89	30.94	11.00	39.24	4.80	50.69	3.38
9	42.34	35.31	32.24	29.36	28.20	20.55	31.16	10.75	39.55	4.69	51.04	3.40
10	41.93	35.19	32.02	29.08	28.20	20.21	31.36	10.51	39.87	4.56	51.42	3.42
11	41.53	35.05	31.82	28.79	$\left\{ \begin{smallmatrix} 28 \\ 28 \end{smallmatrix} \right\}$	$\left\{ \begin{smallmatrix} 19 \\ 19 \end{smallmatrix} \right\}$	31.55	10.27	40.18	4.43	51.82	3.45
12	41.15	34.90	31.63	28.52	28.25	19.27	31.74	10.02	40.49	4.30	52.22	3.49
13	40.78	34.75	31.44	28.25	28.26	18.96	31.92	9.77	40.83	4.16	52.64	3.56
14	40.44	34.60	31.26	27.98	28.26	18.66	32.11	9.51	41.18	4.03	53.07	3.66
15	40.10	34.46	31.06	27.72	28.26	18.35	32.30	9.24	41.55	3.90	53.49	3.77
16	39.76	34.32	30.86	27.46	28.25	18.05	32.52	8.96	41.94	3.80	53.89	3.90
17	39.43	34.18	30.66	27.19	28.24	17.73	32.77	8.69	42.36	3.72	54.27	4.03
18	39.09	34.05	30.45	26.91	28.24	17.39	33.04	8.43	42.78	3.66	54.62	4.16
19	38.75	33.91	30.23	26.62	28.26	17.05	33.34	8.19	43.18	3.62	54.96	4.28
20	38.40	33.78	30.02	26.31	28.30	16.70	33.65	7.97	43.56	3.60	55.29	4.39
21	38.03	33.63	29.82	25.99	28.38	16.35	33.97	7.78	43.92	3.58	55.62	4.49
22	37.66	33.46	29.64	25.66	28.48	16.02	34.27	7.60	44.26	3.54	55.96	4.58
23	37.28	33.28	29.49	25.32	28.61	15.70	34.56	7.43	44.60	3.50	56.32	4.68
24	36.90	33.07	29.37	24.99	28.75	15.41	34.83	7.26	44.94	3.44	56.69	4.79
25	36.54	32.85	29.27	24.67	28.87	15.13	35.08	7.08	45.29	3.38	57.08	4.91
26	36.20	32.62	29.19	24.37	29.00	14.86	35.32	6.88	45.65	3.32	57.47	5.03
27	35.89	32.39	29.11	24.09	29.11	14.59	35.57	6.67	46.03	3.26	57.87	5.17
28	35.60	32.16	29.03	23.82	29.20	14.31	35.84	6.45	46.42	3.21	58.26	5.32
29	35.34	31.95	28.93	23.54	29.28	14.02	36.14	6.23	46.84	3.17	58.65	5.50
30	35.09	31.75	28.82	23.25	29.36	13.71	36.46	6.02	47.25	3.15	59.01	5.68
31	34.82	31.56			29.46	13.39	36.79	5.81	47.67	3.14	59.36	5.87
32	34.55	31.37			29.58	13.07			48.08	3.14		

Mean R.A. 23^h 27^m 42^s.077 Mean Dec. + 86° 53' 17".96 Sec δ 18.422 Tan δ + 18.395

250 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

39 H Cephæi. Mag. 5.6

Day.	JULY.		AUGUST.		SEPTEMBER.		OCTOBER.		NOVEMBER.		DECEMBER.	
	R.A.	Dec. N.	R.A.	Dec. N.	R.A.	Dec. N.	R.A.	Dec. N.	R.A.	Dec. N.	R.A.	Dec. N.
	^h ^m	[°] [']	^h ^m	[°] [']	^h ^m	[°] [']	^h ^m	[°] [']	^h ^m	[°] [']	^h ^m	[°] [']
	23 27	86 53	23 28	86 53	23 28	86 53	23 28	86 53	23 27	86 53	23 27	86 53
	^s	["]	^s	["]	^s	["]	^s	["]	^s	["]	^s	["]
1	59.36	5.87	8.35	13.36	12.80	23.88	12.04	35.11	65.84	45.60	55.43	52.25
2	59.69	6.06	8.53	13.64	12.88	24.22	11.97	35.50	65.55	45.93	55.00	52.38
3	60.00	6.26	8.73	13.93	12.97	24.58	11.87	35.91	65.22	46.23	54.56	52.49
4	60.31	6.44	8.93	14.21	13.07	24.97	11.75	36.31	64.88	46.51	54.14	52.59
5	60.61	6.62	9.15	14.50	13.15	25.37	11.60	36.71	64.53	46.76	53.74	52.68
6	60.90	6.79	9.39	14.80	13.21	25.78	11.44	37.09	64.19	47.00	53.36	52.77
7	61.21	6.95	9.63	15.11	13.25	26.19	11.25	37.46	63.87	47.24	52.99	52.86
8	61.54	7.11	9.88	15.44	13.26	26.61	11.06	37.81	63.57	47.47	52.63	52.95
9	61.89	7.30	10.11	15.79	13.24	27.00	10.86	38.15	63.27	47.71	52.25	53.06
10	62.24	7.50	10.32	16.15	13.20	27.38	10.68	38.47	62.98	47.95	51.87	53.16
11	62.61	7.73	10.50	16.52	13.15	27.74	10.51	38.80	62.69	48.20	51.48	53.26
12	62.98	7.97	10.64	16.88	13.12	28.10	10.34	39.13	62.40	48.45	51.07	53.36
13	63.32	8.23	10.77	17.24	13.10	28.45	10.18	39.46	62.09	48.71	50.66	53.45
14	63.64	8.50	10.88	17.58	13.10	28.80	10.02	39.80	61.76	48.96	50.23	53.52
15	63.93	8.77	11.00	17.91	13.10	29.15	9.87	40.14	61.42	49.21	49.77	53.59
16	64.20	9.03	11.13	18.22	13.10	29.52	9.70	40.49	61.07	49.46	49.32	53.63
17	64.45	9.28	11.27	18.54	13.10	29.90	9.52	40.85	60.70	49.68	48.86	53.65
18	64.69	9.52	11.42	18.86	13.09	30.28	9.32	41.20	60.31	49.90	48.42	53.66
19	64.95	9.75	11.59	19.19	13.08	30.68	9.10	41.55	59.91	50.10	47.99	53.66
20	65.22	9.99	11.75	19.53	13.05	31.08	8.86	41.90	59.51	50.27	47.59	53.66
21	65.50	10.22	11.92	19.88	13.00	31.48	8.60	42.24	59.13	50.44	47.20	53.66
22	65.78	10.46	12.07	20.24	12.93	31.87	8.33	42.55	58.76	50.60	46.84	53.67
23	66.08	10.71	12.20	20.62	12.83	32.26	8.05	42.85	58.41	50.77	46.47	53.69
24	66.39	10.97	12.32	21.00	12.73	32.64	7.78	43.15	58.08	50.94	46.09	53.72
25	66.68	11.24	12.42	21.38	12.61	33.01	7.52	43.44	57.74	51.12	45.70	53.75
26	66.97	11.53	12.51	21.76	12.49	33.36	7.27	43.72	57.40	51.31	45.29	53.78
27	67.25	11.83	12.57	22.14	12.38	33.70	7.03	44.01	57.05	51.52	44.86	53.80
28	67.51	12.14	12.61	22.50	12.27	34.04	6.81	44.30	56.68	51.73	44.41	53.80
29	67.75	12.45	12.65	22.86	12.18	34.38	6.59	44.61	56.28	51.93	43.95	53.77
30	67.97	12.76	12.69	23.21	12.10	34.74	6.36	44.94	55.86	52.10	43.49	53.71
31	68.16	13.07	12.74	23.55	12.04	35.11	6.11	45.27	55.43	52.25	43.06	53.64
32	68.35	13.36	12.80	23.88			5.84	45.60			42.65	53.56

Mean R.A. 23^h 27^m 42^s.077 Mean Dec. + 86° 53' 17".96 Sec δ 18.422 Tan δ + 18.395

APPARENT PLACES OF STARS, 1924. 251

AT UPPER TRANSIT AT GREENWICH.

o Octantis. Mag. 7.2

Day.	JANUARY.		FEBRUARY.		MARCH.		APRIL.		MAY.		JUNE.	
	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.
	h m		h m		h m		h m		h m		h m	
	O I I	88° 47'	O I O	88° 47'	O I O	88° 47'	O I O	88° 46'	O I I	88° 46'	O I I	88° 46'
	s		s		s		s		s		s	
1	41.85	31.41	73.63	25.15	57.72	15.55	55.19	63.38	6.31	52.87	29.21	44.94
2	40.72	31.29	72.90	24.83	57.48	15.16	55.36	63.03	6.82	52.57	30.04	44.73
3	39.60	31.15	72.24	24.51	57.27	14.78	55.51	62.69	7.33	52.27	30.91	44.53
4	38.52	30.99	71.64	24.20	57.08	14.42	55.64	62.33	7.85	51.96	31.82	44.34
5	37.51	30.82	71.05	23.91	56.87	14.08	55.76	61.97	8.40	51.65	32.79	44.15
6	36.55	30.64	70.45	23.62	56.63	13.73	55.90	61.61	8.98	51.33	33.80	43.97
7	35.64	30.47	69.83	23.35	56.37	13.38	56.06	61.24	9.61	51.01	34.84	43.81
8	34.77	30.31	69.19	23.08	56.09	13.04	56.25	60.86	10.29	50.70	35.87	43.68
9	33.91	30.15	68.52	22.80	55.80	12.68	56.47	60.47	11.02	50.39	36.89	43.55
10	33.03	30.01	67.83	22.52	55.51	12.31	56.75	60.07	11.79	50.09	37.88	43.44
11	32.11	29.87	67.13	22.22	55.23	11.93	57.09	59.68	12.59	49.81	38.81	43.33
12	31.17	29.73	66.43	21.91	54.97	11.55	57.47	59.30	13.40	49.55	39.69	43.22
13	30.20	29.57	65.75	21.59	54.75	11.15	57.90	58.93	14.18	49.30	40.54	43.10
14	29.19	29.40	65.10	21.24	54.58	10.75	58.35	58.58	14.91	49.06	41.38	42.97
15	28.18	29.23	64.48	20.89	54.46	10.33	58.80	58.24	15.60	48.83	42.24	42.82
16	27.17	29.05	63.93	20.54	54.40	9.92	59.22	57.90	16.26	48.58	43.16	42.67
17	26.19	28.85	63.42	20.18	54.39	9.53	59.59	57.58	16.89	48.32	44.13	42.52
18	25.23	28.62	62.97	19.82	54.42	9.14	59.93	57.25	17.53	48.04	45.17	42.38
19	24.31	28.39	62.56	19.47	54.46	8.78	60.23	56.91	18.21	47.76	46.25	42.26
20	23.42	28.14	62.17	19.13	54.48	8.41	60.53	56.55	18.97	47.47	47.35	42.16
21	22.59	27.88	61.79	18.80	54.46	8.06	60.86	56.18	19.80	47.19	48.45	42.09
22	21.82	27.64	61.38	18.48	54.40	7.70	61.25	55.80	20.68	46.93	49.52	42.04
23	21.09	27.40	60.93	18.16	{ 54.31 }	{ 7.34 }	61.71	55.42	21.60	46.68	50.53	42.00
24	20.36	27.17	60.43	17.84	54.10	6.55	62.24	55.05	22.54	46.45	51.50	41.96
25	19.61	26.96	59.90	17.50	54.05	6.13	62.82	54.70	23.46	46.24	52.43	41.92
26	18.82	26.75	59.36	17.13	54.06	5.72	63.43	54.36	24.35	46.05	53.34	41.88
27	17.98	26.53	58.85	16.75	54.15	5.29	64.06	54.04	25.21	45.87	54.25	41.84
28	17.10	26.30	58.40	16.36	54.32	4.88	64.67	53.74	26.02	45.69	55.18	41.80
29	16.19	26.05	58.03	15.95	54.52	4.49	65.24	53.45	26.81	45.52	56.12	41.75
30	15.29	25.77	57.72	15.55	54.75	4.11	65.79	53.16	27.61	45.33	57.09	41.70
31	14.43	25.47			54.98	3.74	66.31	52.87	28.40	45.13	58.08	41.65
32	13.63	25.15			55.19	3.38			29.21	44.94		

Mean R.A. o^h 12^m 16^s.875 Mean Dec. — 88° 47' 7".76 Sec δ 47.180 Tan δ — 47.169

252 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

o Octantis. Mag. 7.2

Day.	JULY.		AUGUST.		SEPTEMBER.		OCTOBER.		NOVEMBER.		DECEMBER.	
	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.
	h m		h m		h m		h m		h m		h m	
	0 11 88° 46'		0 12 88° 46'		0 12 88° 46'		0 12 88° 46'		0 12 88° 47'		0 11 88° 47'	
	s		s		s		s		s		s	
1	58.08	41.65	27.94	43.57	49.26	50.44	54.80	59.64	42.87	8.50	78.06	13.48
2	59.11	41.61	28.91	43.73	49.65	50.75	54.58	59.95	42.27	8.70	77.20	13.57
3	60.19	41.57	29.84	43.92	49.98	51.04	54.37	60.24	41.71	8.92	76.30	13.66
4	61.28	41.55	30.70	44.11	50.27	51.32	54.20	60.51	41.15	9.15	75.36	13.76
5	62.39	41.56	31.50	44.30	50.56	51.59	54.07	60.78	40.56	9.39	74.36	13.85
6	63.49	41.58	32.23	44.50	50.87	51.85	53.97	61.07	39.92	9.64	73.31	13.93
7	64.55	41.62	32.92	44.69	51.22	52.10	53.88	61.36	39.22	9.89	72.22	14.00
8	65.55	41.66	33.60	44.86	51.61	52.35	53.79	61.67	38.46	10.14	71.11	14.05
9	66.50	41.71	34.28	45.02	52.04	52.62	53.65	62.00	37.64	10.37	70.01	14.08
10	67.39	41.75	35.01	45.17	52.47	52.91	53.45	62.34	36.78	10.59	68.92	14.10
11	68.25	41.78	35.79	45.33	52.88	53.22	53.19	62.67	35.91	10.79	67.85	14.10
12	69.11	41.80	36.61	45.49	53.24	53.55	52.86	63.00	35.04	10.99	66.81	14.09
13	70.01	41.80	37.46	45.67	53.53	53.88	52.48	63.33	34.16	11.16	65.81	14.08
14	70.97	41.81	38.31	45.87	53.75	54.22	52.06	63.64	33.30	11.32	64.84	14.07
15	71.97	41.82	39.13	46.10	53.93	54.55	51.62	63.94	32.47	11.48	63.90	14.06
16	73.03	41.85	39.89	46.34	54.06	54.88	51.18	64.23	31.66	11.63	62.98	14.05
17	74.12	41.90	40.59	46.60	54.16	55.19	50.74	64.51	30.88	11.79	62.05	14.04
18	75.19	41.97	41.24	46.85	54.24	55.50	50.32	64.78	30.12	11.95	61.10	14.05
19	76.24	42.07	41.83	47.10	54.32	55.81	49.91	65.05	29.36	12.12	60.10	14.05
20	77.23	42.18	42.40	47.35	54.41	56.10	49.52	65.32	28.57	12.29	59.04	14.04
21	78.16	42.30	42.94	47.59	54.51	56.39	49.15	65.59	27.73	12.47	57.94	14.03
22	79.05	42.41	43.48	47.82	54.63	56.69	48.78	65.87	26.84	12.64	56.79	13.99
23	79.92	42.53	44.03	48.06	54.77	56.99	48.40	66.16	25.89	12.80	55.63	13.92
24	80.77	42.65	44.59	48.29	54.91	57.29	47.97	66.45	24.87	12.94	54.50	13.83
25	81.60	42.76	45.17	48.52	55.04	57.62	47.49	66.75	23.81	13.06	53.42	13.72
26	82.43	42.86	45.77	48.76	55.16	57.96	46.94	67.05	22.75	13.16	52.41	13.59
27	83.29	42.97	46.40	49.01	55.24	58.30	46.31	67.34	21.71	13.23	51.46	13.47
28	84.17	43.08	47.03	49.26	55.24	58.65	45.63	67.61	20.72	13.28	50.55	13.35
29	85.07	43.19	47.65	49.54	55.16	58.99	44.91	67.86	19.79	13.34	49.66	13.25
30	86.00	43.30	48.24	49.83	55.01	59.32	44.19	68.08	18.91	13.40	48.76	13.16
31	86.96	43.43	48.79	50.13	54.80	59.64	43.51	68.29	18.06	13.48	47.83	13.08
32	87.94	43.57	49.26	50.44			42.87	68.50			46.84	13.00

Mean R.A. $\alpha^h 12^m 16^s.875$ Mean Dec. $- 88^\circ 47' 7''.76$ Sec $\delta 47.180$ Tan $\delta - 47.169$

APPARENT PLACES OF STARS, 1924. 253

AT UPPER TRANSIT AT GREENWICH.

9 B Octantis. Mag. 7.8

Day.	JANUARY.		FEBRUARY.		MARCH.		APRIL.		MAY.		JUNE.	
	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.
	^h ^m 23 ^s 186° 3'		^h ^m 23 ^s 186° 3'		^h ^m 23 ^s 186° 3'		^h ^m 23 ^s 186° 3'		^h ^m 23 ^s 186° 3'		^h ^m 23 ^s 186° 3'	
1	54.05	50.10	43.63	50.34	34.40	45.55	27.22	36.45	24.18	25.43	25.83	14.64
2	53.71	50.22	43.28	50.22	34.12	45.28	27.07	36.13	24.15	25.09	25.94	14.32
3	53.35	50.32	42.94	50.10	33.86	45.01	26.93	35.81	24.11	24.75	26.06	13.99
4	52.99	50.40	42.63	49.96	33.61	44.75	26.78	35.50	24.08	24.40	26.19	13.66
5	52.65	50.45	42.31	49.83	33.36	44.51	26.61	35.19	24.06	24.04	26.35	13.33
6	52.32	50.49	42.01	49.72	33.11	44.28	26.44	34.87	24.04	23.67	26.52	12.99
7	52.01	50.52	41.70	49.62	32.85	44.04	26.27	34.54	24.03	23.29	26.69	12.66
8	51.71	50.55	41.39	49.52	32.58	43.81	26.10	34.20	24.04	22.91	26.88	12.35
9	51.41	50.59	41.06	49.41	32.31	43.58	25.94	33.85	24.06	22.52	27.08	12.05
10	51.11	50.64	40.73	49.31	32.03	43.34	25.80	33.49	24.09	22.14	27.28	11.78
11	50.81	50.69	40.39	49.20	31.75	43.09	25.66	33.12	24.15	21.76	27.46	11.52
12	50.49	50.76	40.04	49.07	31.48	42.81	25.54	32.75	24.21	21.39	27.63	11.26
13	50.16	50.82	39.70	48.93	31.21	42.52	25.43	32.36	24.28	21.04	27.78	11.00
14	49.83	50.88	39.35	48.79	30.95	42.23	25.34	31.98	24.34	20.71	27.93	10.74
15	49.47	50.93	39.01	48.62	30.70	41.92	25.26	31.60	24.38	20.38	28.08	10.46
16	49.11	50.96	38.68	48.43	30.46	41.60	25.19	31.24	24.41	20.06	28.24	10.17
17	48.76	50.98	38.35	48.24	30.25	41.27	25.11	30.90	24.44	19.73	28.42	9.86
18	48.41	50.98	38.04	48.04	30.04	40.95	25.02	30.57	24.46	19.38	28.62	9.55
19	48.05	50.96	37.75	47.83	29.84	40.64	24.92	30.24	24.50	19.02	28.85	9.25
20	47.70	50.93	37.48	47.62	29.64	40.35	24.82	29.89	24.54	18.64	29.09	8.97
21	47.37	50.89	37.20	47.43	29.44	40.07	24.70	29.55	24.61	18.25	29.33	8.71
22	47.05	50.84	36.91	47.25	29.22	39.79	24.58	29.18	24.70	17.87	29.58	8.46
23	46.73	50.78	36.61	47.08	29.00	39.51	24.48	28.79	24.80	17.49	29.81	8.23
24	46.42	50.73	36.30	46.90	28.76	39.22	24.39	28.39	24.92	17.13	30.05	8.02
25	46.11	50.70	35.98	46.72	28.52	38.91	24.33	27.98	25.04	16.79	30.28	7.82
26	45.79	50.68	35.65	46.53	28.29	38.58	24.30	27.58	25.16	16.47	30.50	7.62
27	45.46	50.66	35.32	46.31	28.06	38.24	24.27	27.19	25.29	16.15	30.72	7.41
28	45.11	50.63	35.00	46.08	27.86	37.87	24.25	26.81	25.40	15.85	30.93	7.20
29	44.64	50.59	34.69	45.82	27.68	37.50	24.24	26.45	25.50	15.56	31.15	6.98
30	44.36	50.53	34.40	45.55	27.52	37.14	{ 24.21 }	{ 26.10 }	25.61	15.27	31.38	6.75
31	44.00	50.44			27.37	36.79	24.18	25.43	25.72	14.96	31.62	6.52
32	43.63	50.34			27.22	36.45			25.83	14.64		

Mean R.A. 2^h 31^m 50^s.086 Mean Dec. — 86° 3' 24".40 Sec δ 14".42 Tan δ — 14.507

254 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

9 B Octantis. Mag. 7.8

Day.	JULY.		AUGUST.		SEPTEMBER.		OCTOBER.		NOVEMBER.		DECEMBER.	
	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.
	^h ^m		^h ^m		^h ^m		^h ^m		^h ^m		^h ^m	
	23 ^h 1 ^m 86° 3'		23 ^h 1 ^m 86° 3'		23 ^h 1 ^m 86° 3'		23 ^h 1 ^m 86° 3'		23 ^h 1 ^m 86° 3'		23 ^h 1 ^m 86° 3'	
	^s		^s		^s		^s		^s		^s	
1	31.62	6.52	40.53	2.53	49.90	4.20	56.50	10.77	58.48	20.31	55.12	29.11
2	31.86	6.30	40.87	2.48	50.17	4.38	56.62	11.06	58.45	20.59	54.95	29.34
3	32.13	6.08	41.21	2.46	50.42	4.56	56.72	11.33	58.44	20.87	54.78	29.58
4	32.41	5.86	41.53	2.46	50.66	4.75	56.83	11.60	58.43	21.17	54.60	29.85
5	32.70	5.66	41.85	2.47	50.89	4.92	56.96	11.85	58.41	21.48	54.40	30.11
6	33.00	5.46	42.15	2.50	51.12	5.08	57.10	12.10	58.39	21.81	54.18	30.38
7	33.30	5.29	42.44	2.52	51.36	5.22	57.25	12.36	58.35	22.15	53.95	30.64
8	33.58	5.15	42.71	2.53	51.61	5.36	57.40	12.64	58.30	22.50	53.70	30.88
9	33.85	5.02	42.98	2.53	51.87	5.50	57.54	12.94	58.22	22.84	53.45	31.12
10	34.10	4.88	43.26	2.52	52.15	5.66	57.67	13.25	58.12	23.18	53.19	31.34
11	34.35	4.74	43.56	2.51	52.43	5.84	57.80	13.57	58.02	23.51	52.93	31.54
12	34.59	4.59	43.87	2.48	52.70	6.04	57.91	13.90	57.91	23.83	52.68	31.74
13	34.84	4.43	44.20	2.47	52.96	6.25	57.99	14.24	57.80	24.14	52.42	31.92
14	35.09	4.25	44.54	2.50	53.19	6.49	58.05	14.57	57.68	24.44	52.18	32.10
15	35.37	4.07	44.87	2.53	53.42	6.73	58.11	14.90	57.57	24.72	51.94	32.27
16	35.67	3.90	45.19	2.59	53.64	6.97	58.16	15.22	57.45	25.00	51.71	32.43
17	35.99	3.74	45.51	2.66	53.84	7.21	58.21	15.54	57.35	25.28	51.48	32.60
18	36.31	3.60	45.82	2.75	54.04	7.46	58.26	15.85	57.25	25.56	51.24	32.79
19	36.63	3.49	46.12	2.84	54.23	7.69	58.31	16.14	57.15	25.84	50.99	32.98
20	36.94	3.39	46.40	2.94	54.42	7.92	58.37	16.44	57.05	26.13	50.73	33.18
21	37.25	3.31	46.68	3.04	54.62	8.14	58.43	16.73	56.94	26.43	50.44	33.38
22	37.55	3.24	46.96	3.14	54.81	8.36	58.49	17.03	56.80	26.74	50.13	33.56
23	37.84	3.18	47.23	3.23	55.02	8.59	58.56	17.34	56.64	27.05	49.80	33.72
24	38.12	3.11	47.50	3.31	55.23	8.81	58.62	17.66	56.47	27.36	49.47	33.85
25	38.40	3.04	47.78	3.39	55.44	9.05	58.66	18.01	56.28	27.66	49.15	33.96
26	38.68	2.97	48.07	3.48	55.65	9.31	58.68	18.36	56.07	27.94	48.85	34.05
27	38.96	2.90	48.38	3.56	55.86	9.57	58.68	18.71	55.87	28.20	48.55	34.14
28	39.26	2.83	48.69	3.66	56.06	9.85	58.66	19.06	55.66	28.44	48.26	34.22
29	39.57	2.74	49.00	3.76	56.23	10.15	58.62	19.41	55.47	28.66	47.99	34.31
30	39.87	2.66	49.31	3.89	56.37	10.46	58.57	19.73	55.29	28.88	47.72	34.42
31	40.19	2.59	49.61	4.03	56.50	10.77	58.52	20.03	55.12	29.11	47.44	34.53
32	40.53	2.53	49.90	4.20			58.48	20.31			47.15	34.65

Mean R.A. 2^h 31^m 50^s.086 Mean Dec. — 86° 3' 24".40 Sec δ 14.542 Tan δ — 14.507

APPARENT PLACES OF STARS, 1924. 255

AT UPPER TRANSIT AT GREENWICH.

10 B Octantis. Mag. 8.4.

Day.	JANUARY.		FEBRUARY.		MARCH.		APRIL.		MAY.		JUNE.	
	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.
	^h ^m ^s 2 50 88° 29		^h ^m ^s 2 49 88° 28		^h ^m ^s 2 49 88° 28		^h ^m ^s 2 49 88° 28		^h ^m ^s 2 49 88° 28		^h ^m ^s 2 49 88° 28	
1	51.43	2.23	84.01	63.21	58.81	59.10	38.21	50.61	28.04	40.27	29.64	29.19
2	50.55	2.37	83.05	63.12	58.03	58.86	37.77	50.30	27.90	39.94	29.85	28.88
3	49.64	2.48	82.15	63.01	57.30	58.61	37.31	49.99	27.76	39.61	30.08	28.55
4	48.72	2.58	81.28	62.90	56.59	58.38	36.84	49.69	27.60	39.27	30.35	28.21
5	47.83	2.65	80.45	62.80	55.90	58.16	36.36	49.39	^{ 27 44 } 27.44	^{ 38 93 } 38.93	30.65	27.87
6	46.97	2.72	79.63	62.70	55.20	57.94	35.86	49.09	27.14	38.22	31.00	27.53
7	46.14	2.77	78.80	62.62	54.48	57.72	35.36	48.79	27.03	37.84	31.39	27.20
8	45.34	2.83	77.95	62.53	53.74	57.51	34.87	48.47	26.95	37.46	31.82	26.88
9	44.56	2.90	77.09	62.45	52.97	57.30	34.37	48.13	26.92	37.07	32.27	26.57
10	43.79	2.97	76.20	62.37	52.20	57.07	33.89	47.79	26.94	36.69	32.70	26.28
11	43.00	3.05	75.29	62.29	51.43	56.84	33.44	47.43	26.99	36.32	33.10	26.01
12	42.17	3.13	74.36	62.20	50.66	56.58	33.03	47.06	27.06	35.95	33.48	25.75
13	41.32	3.21	73.42	62.10	49.89	56.32	32.67	46.68	27.15	35.60	33.82	25.49
14	40.45	3.29	72.48	61.97	49.14	56.06	32.35	46.31	27.23	35.26	34.14	25.21
15	39.55	3.35	71.54	61.83	48.42	55.77	32.07	45.95	27.29	34.94	34.45	24.92
16	38.62	3.41	70.63	61.67	47.73	55.47	31.80	45.60	27.31	34.61	34.78	24.62
17	37.68	3.45	69.75	61.49	47.09	55.17	31.52	45.26	27.29	34.29	35.16	24.31
18	36.73	3.48	68.90	61.31	46.49	54.87	31.22	44.94	27.25	33.95	35.60	24.01
19	35.79	3.50	68.08	61.13	45.92	54.57	30.90	44.62	27.23	33.59	36.10	23.71
20	34.87	3.49	67.29	60.95	45.35	54.29	30.55	44.29	27.25	33.22	36.63	23.41
21	33.97	3.47	66.52	60.77	44.77	54.02	30.17	43.96	27.33	32.85	37.19	23.13
22	33.10	3.44	65.75	60.61	44.16	53.76	29.78	43.61	27.46	32.46	37.77	22.87
23	32.26	3.42	64.96	60.45	43.51	53.51	29.42	43.24	27.65	32.09	38.34	22.62
24	31.44	3.40	64.12	60.31	42.83	53.24	29.11	42.85	27.88	31.73	38.90	22.40
25	30.62	3.38	63.25	60.16	42.13	52.95	28.85	42.45	28.13	31.38	39.43	22.18*
26	29.79	3.37	62.34	59.99	41.44	52.64	28.65	42.06	28.38	31.05	39.94	21.97
27	28.92	3.37	61.42	59.79	40.78	52.31	28.51	41.68	28.62	30.73	40.45	21.75
28	27.99	3.38	60.51	59.58	40.17	51.97	28.39	41.31	28.84	30.42	40.96	21.52
29	27.02	3.37	59.63	59.35	39.61	51.62	28.28	40.95	29.06	30.12	41.47	21.30
30	26.02	3.33	58.81	59.10	39.10	51.27	28.16	40.60	29.26	29.82	41.99	21.07
31	25.01	3.28			38.65	50.93	28.04	40.27	29.45	29.51	42.54	20.82
32	24.01	3.21			38.21	50.61			29.64	29.19		

Mean R.A. 2^h 50^m 35^s.267 Mean Dec. — 88° 28' 36".99 Sec δ 37.623 Tan δ — 37.610

256 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

10 B Octantis. Mag. 8.4.

Day.	JULY.		AUGUST.		SEPTEMBER.		OCTOBER.		NOVEMBER.		DECEMBER.	
	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.
	h m	^s	h m	^s	h m	^s	h m	^s	h m	^s	h m	^s
	2 49	88° 28'	2 50	88° 28'	2 50	88° 28'	2 50	88° 28'	2 50	88° 28'	2 50	88° 28'
1	42.54	20.82	4.28	16.29	28.45	17.32	46.54	23.33	53.28	32.66	45.95	41.60
2	43.12	20.58	5.14	16.22	29.19	17.48	46.88	23.62	53.24	32.94	45.55	41.84
3	43.74	20.34	6.01	16.17	29.87	17.64	47.21	23.89	53.24	33.22	45.14	42.10
4	44.40	20.11	6.85	16.14	30.50	17.80	47.55	24.14	53.25	33.51	44.72	42.37
5	45.09	19.90	7.66	16.13	31.10	17.94	47.90	24.38	53.27	33.82	44.25	42.65
6	45.81	19.69	8.43	16.14	31.70	18.09	48.29	24.62	53.28	34.15	43.73	42.93
7	46.53	19.51	9.15	16.14	32.32	18.22	48.72	24.87	53.24	34.49	43.17	43.20
8	47.22	19.34	9.84	16.14	32.98	18.34	49.16	25.14	53.16	34.84	42.57	43.46
9	47.89	19.18	10.52	16.13	33.68	18.46	49.59	25.42	53.03	35.19	41.94	43.71
10	48.52	19.03	11.22	16.10	34.41	18.60	49.99	25.72	52.85	35.53	41.30	43.94
11	49.11	18.88	11.96	16.06	35.14	18.75	50.36	26.03	52.64	35.86	40.65	44.17
12	49.67	18.72	12.74	16.02	35.88	18.93	50.68	26.36	52.40	36.19	40.00	44.38
13	50.25	18.54	13.55	16.00	36.59	19.12	50.96	26.69	52.15	36.50	39.37	44.58
14	50.86	18.36	14.41	15.99	37.27	19.33	51.20	27.02	51.89	36.81	38.75	44.77
15	51.52	18.16	15.27	16.00	37.91	19.55	51.41	27.34	51.64	37.10	38.15	44.96
16	52.23	17.97	16.13	16.03	38.51	19.78	51.60	27.64	51.40	37.38	37.57	45.15
17	52.99	17.79	16.96	16.08	39.07	20.01	51.77	27.94	51.16	37.66	36.99	45.34
18	53.78	17.63	17.77	16.15	39.61	20.24	51.95	28.24	50.94	37.94	36.41	45.53
19	54.58	17.50	18.55	16.22	40.14	20.45	52.13	28.53	50.72	38.23	35.79	45.73
20	55.36	17.38	19.30	16.29	40.67	20.66	52.32	28.82	50.51	38.52	35.12	45.94
21	56.13	17.28	20.02	16.37	41.20	20.87	52.52	29.10	50.27	38.82	34.41	46.16
22	56.88	17.19	20.73	16.45	41.75	21.08	52.74	29.40	50.00	39.14	33.63	46.36
23	57.61	17.11	21.44	16.52	42.31	21.29	52.96	29.70	49.66	39.46	32.81	46.54
24	58.31	17.02	22.16	16.59	42.89	21.50	53.17	30.02	49.26	39.75	31.97	46.70
25	59.01	16.94	22.89	16.65	43.49	21.72	53.35	30.35	48.80	40.10	31.14	46.84
26	59.70	16.85	23.65	16.71	44.09	21.95	53.47	30.69	48.31	40.39	30.33	46.95
27	60.40	16.76	24.43	16.78	44.67	22.20	53.54	31.04	47.79	40.66	29.55	47.06
28	61.12	16.65	25.23	16.86	45.22	22.46	53.55	31.39	47.28	40.92	28.81	47.16
29	61.86	16.55	26.04	16.94	45.71	22.75	53.51	31.73	46.80	41.15	28.11	47.28
30	62.64	16.46	26.86	17.05	46.15	23.04	53.43	32.06	46.36	41.38	27.40	47.40
31	63.44	16.37	27.67	17.17	46.54	23.33	53.34	32.37	45.95	41.60	26.69	47.53
32	64.28	16.29	28.45	17.32			53.28	32.66			25.94	47.67

Mean R.A. 2^h 50^m 35^s.267 Mean Dec. — 88° 23' 36".99 Sec δ 37.623 Tan δ — 37.610

APPARENT PLACES OF STARS, 1924. 257

AT UPPER TRANSIT AT GREENWICH.

31 G Mensæ. Mag. 6.2.

Day.	JANUARY.		FEBRUARY.		MARCH.		APRIL.		MAY.		JUNE.	
	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.
	h m	°	h m	°	h m	°	h m	°	h m	°	h m	°
	5 45	84 49	5 44	84 49	5 44	84 50	5 44	84 49	5 44	84 49	5 44	84 49
1	8 ^s .95	51 ["] .30	63.80	59 ["] .82	56.48	3 ["] .93	47.86	63 ["] .49	40.58	58 ["] .74	35 ["] .62	50 ["] .44
2	8.85	51.66	63.56	60.02	56.20	3.96	47.61	63.39	40.38	58.54	35.52	50.16
3	8.73	52.00	63.32	60.19	55.92	3.98	47.36	63.29	40.18	58.34	35.41	49.86
4	8.60	52.33	63.09	60.35	55.65	4.02	47.12	63.20	39.99	58.14	35.30	49.54
5	8.45	52.64	62.86	60.52	55.38	4.06	46.86	63.11	39.79	57.94	35.20	49.22
6	8.31	52.93	62.64	60.69	55.12	4.11	46.61	63.03	39.58	57.72	35.10	48.88
7	8.17	53.21	62.42	60.86	54.86	4.15	46.34	62.95	39.37	57.49	35.02	48.53
8	8.04	53.48	62.20	61.04	54.59	4.19	46.07	62.85	39.17	57.24	34.94	48.17
9	7.91	53.75	61.98	61.23	54.33	4.25	45.80	62.74	38.97	56.98	34.87	47.82
10	7.78	54.03	61.76	61.43	54.05	4.31	45.53	62.62	38.77	56.71	34.81	47.47
11	7.66	54.31	61.53	61.62	53.77	4.35	45.26	62.48	38.59	56.43	34.76	47.14
12	7.53	54.60	61.28	61.81	53.49	4.38	45.00	62.32	38.41	56.13	34.72	46.82
13	7.40	54.91	61.02	62.00	53.19	4.41	44.74	62.15	38.25	55.84	34.68	46.52
14	7.25	55.21	60.76	62.17	52.89	4.42	44.49	61.98	38.10	55.56	34.63	46.25
15	7.09	55.52	60.50	62.33	52.60	4.41	44.25	61.80	37.95	55.29	34.56	45.96
16	6.93	55.83	60.24	62.47	52.31	4.37	44.01	61.61	37.79	55.04	34.49	45.65
17	6.76	56.13	59.96	62.59	52.02	4.33	43.78	61.44	37.64	54.80	{ 34 42 }	{ 45 33 }
18	6.58	56.41	59.69	62.69	51.74	4.28	43.56	61.28	37.48	54.56	34.31	44.64
19	6.40	56.68	59.43	62.79	51.47	4.23	43.33	61.14	37.31	54.31	34.27	44.28
20	6.20	56.94	59.18	62.88	51.21	4.19	43.09	61.01	37.14	54.05	34.25	43.91
21	6.01	57.19	58.93	62.97	50.95	4.15	42.84	60.86	36.96	53.77	34.24	43.55
22	5.82	57.42	58.69	63.08	50.68	4.13	42.59	60.71	36.79	53.46	34.24	43.20
23	5.63	57.63	58.44	63.20	50.41	4.12	42.33	60.54	36.63	53.14	34.25	42.86
24	5.45	57.85	58.18	63.32	50.14	4.11	42.08	60.35	36.49	52.81	34.26	42.54
25	5.27	58.07	57.93	63.46	49.85	4.10	41.83	60.13	36.36	52.48	34.27	42.2

Mean R.A. $5^h 44^m 53^s.032$ Mean Dec. $-84^\circ 49' 37''.44$ Sec δ 11.091 Tan δ -11.046
17-24 (NAUTICAL ALMANAC, 1924) S

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258 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

31 G Mensæ. Mag. 6.2.

Day.	JULY.		AUGUST.		SEPTEMBER.		OCTOBER.		NOVEMBER.		DECEMBER.	
	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.
	^h ^m ^s 5 44 ^s 84 49	^h ^m ^s 5 44 ^s 84 49	^h ^m ^s 5 44 ^s 84 49	^h ^m ^s 5 44 ^s 84 49	^h ^m ^s 5 44 ^s 84 49	^h ^m ^s 5 44 ^s 84 49	^h ^m ^s 5 44 ^s 84 49	^h ^m ^s 5 44 ^s 84 49	^h ^m ^s 5 44 ^s 84 49	^h ^m ^s 5 44 ^s 84 49	^h ^m ^s 5 44 ^s 84 49	^h ^m ^s 5 44 ^s 84 49
1	34.30	40.36	36.93	30.91	42.83	24.89	49.90	24.32	56.21	29.39	59.34	38.17
2	34.31	40.01	37.08	30.62	43.06	24.80	50.11	24.42	56.35	29.61	59.39	38.46
3	34.33	39.66	37.25	30.35	43.30	24.74	50.32	24.52	56.50	29.82	59.44	38.77
4	34.36	39.30	37.42	30.10	43.53	24.68	50.53	24.62	56.66	30.03	59.49	39.10
5	34.41	38.94	37.60	29.86	43.73	24.62	50.74	24.70	56.82	30.26	59.53	39.43
6	34.46	38.59	37.77	29.64	43.94	24.55	50.95	24.77	56.99	30.50	59.57	39.75
7	34.53	38.26	37.93	29.44	44.14	24.47	51.17	24.84	57.15	30.76	59.59	40.14
8	34.60	37.94	38.08	29.24	44.36	24.38	51.41	24.91	57.31	31.04	59.60	40.51
9	34.68	37.64	38.23	29.03	44.58	24.27	51.64	25.01	57.46	31.34	59.60	40.88
10	34.75	37.35	38.38	28.82	44.81	24.16	51.88	25.12	57.60	31.65	59.59	41.25
11	34.80	37.08	38.52	28.60	45.05	24.07	52.12	25.25	57.73	31.96	59.58	41.60
12	34.84	36.79	38.69	28.36	45.30	24.00	52.36	25.39	57.85	32.27	59.55	41.92
13	34.89	36.49	38.86	28.10	45.56	23.96	52.59	25.56	57.96	32.58	59.52	42.26
14	34.95	36.17	39.04	27.85	45.82	23.93	52.81	25.74	58.07	32.88	59.49	42.58
15	35.01	35.85	39.24	27.62	46.06	23.92	53.02	25.92	58.17	33.17	59.47	42.85
16	35.07	35.51	39.45	27.40	46.31	23.92	53.22	26.10	58.27	33.46	59.45	43.20
17	35.14	35.17	39.66	27.20	46.55	23.93	53.42	26.27	58.37	33.73	59.43	43.51
18	35.24	34.84	39.86	27.03	46.78	23.95	53.62	26.45	58.47	34.00	59.41	43.82
19	35.35	34.52	40.07	26.87	47.01	23.96	53.82	26.63	58.58	34.28	59.38	44.12
20	35.47	34.22	40.28	26.71	47.24	23.97	54.01	26.79	58.69	34.56	59.35	44.44
21	35.59	33.92	40.48	26.56	47.46	23.97	54.20	26.95	58.80	34.85	59.31	44.80
22	35.72	33.65	40.67	26.41	47.69	23.96	54.40	27.11	58.90	35.17	59.25	45.22
23	35.84	33.38	40.87	26.27	47.92	23.96	54.60	27.27	58.99	35.50	59.18	45.60
24	35.95	33.12	41.07	26.12	48.16	23.95	54.81	27.44	59.06	35.86	59.09	45.91
25	36.07	32.86	41.27	25.96	48.41	23.95	55.02	27.64	59.13	36.22	58.99	46.22
26	36.18	32.60	41.47	25.79	48.66	23.96	55.23	27.86	59.19	36.58	58.88	46.6
27	36.29	32.33	41.67	25.62	48.92	23.99	55.42	28.11	59.22	36.92	58.78	46.9
28	36.41	32.07	41.88	25.45	49.18	24.04	55.60	28.37	59.25	37.26	58.68	47.11
29	36.52	31.79	42.11	25.29	49.42	24.12	55.77	28.63	59.28	37.58	58.59	47.41
30	36.65	31.50	42.34	25.13	49.66	24.21	55.92	28.89	59.30	37.88	58.51	47.71
31	36.79	31.20	42.59	25.00	49.90	24.32	56.07	29.15	59.34	38.17	58.43	48.01
32	36.93	30.91	42.83	24.89			56.21	29.39			58.34	48.41

Mean R.A. 5^h 44^m 53^s.032 Mean Dec. — 84° 49' 37".44 Sec δ 11.091 Tan δ — 11.046

APPARENT PLACES OF STARS, 1924. 259

AT UPPER TRANSIT AT GREENWICH.

12 B Octantis. Mag. 6.8.

Day.	JANUARY.		FEBRUARY.		MARCH.		APRIL.		MAY.		JUNE.	
	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.
	^h ^m 6 0	85° 56'	^h ^m 5 59	85° 56'	^h ^m 5 59	85° 56'	^h ^m 5 59	85° 56'	^h ^m 5 59	85° 56'	^h ^m 5 59	85° 56'
1	12.80	11.41	66.67	20.36	57.56	25.11	46.56	25.43	36.98	21.39	30.13	13.61
2	12.67	11.78	66.37	20.58	57.19	25.17	46.23	25.36	36.72	21.21	29.98	13.35
3	12.53	12.14	66.07	20.78	56.84	25.22	45.92	25.29	36.45	21.02	29.82	13.06
4	12.37	12.49	65.78	20.97	56.50	25.26	45.59	25.22	36.19	20.84	29.66	12.76
5	12.21	12.81	65.50	21.15	56.17	25.31	45.26	25.16	35.92	20.66	29.50	12.45
6	12.04	13.12	65.23	21.33	55.84	25.38	44.93	25.11	35.64	20.46	29.36	12.12
7	11.87	13.41	64.96	21.52	55.52	25.46	44.59	25.04	35.36	20.25	29.22	11.78
8	11.71	13.69	64.70	21.72	55.19	25.53	44.25	24.97	35.08	20.03	29.10	11.43
9	11.57	13.97	64.42	21.93	54.85	25.61	43.90	24.89	34.82	19.79	29.00	11.09
10	11.43	14.25	64.14	22.14	54.50	25.69	43.54	24.79	34.56	19.54	28.91	10.76
11	11.28	14.55	63.85	22.36	54.14	25.76	43.18	24.68	34.30	19.27	28.83	10.43
12	11.14	14.86	63.56	22.58	53.77	25.82	42.83	24.54	34.05	18.99	28.75	10.13
13	10.98	15.18	63.25	22.78	53.41	25.87	42.49	24.39	33.83	18.72	28.67	9.84
14	10.82	15.49	62.93	22.98	53.03	25.90	42.16	24.23	33.61	18.46	28.58	9.56
15	10.64	15.81	62.60	23.15	52.65	25.92	41.83	24.07	33.41	18.21	28.48	9.28
16	10.45	16.13	62.27	23.32	52.27	25.92	41.53	23.91	33.21	17.98	28.37	8.99
17	10.24	16.44	61.93	23.46	51.91	25.90	41.24	23.76	32.99	17.75	28.27	8.68
18	10.03	16.73	61.60	23.58	51.55	25.88	40.94	23.63	32.76	17.53	28.16	8.34
19	9.80	17.02	61.27	23.70	51.21	25.85	40.64	23.50	32.53	17.30	28.06	7.99
20	9.57	17.30	60.94	23.82	50.87	25.83	40.32	23.39	32.29	17.05	27.99	7.63
21	9.33	17.56	60.63	23.93	50.53	25.81	40.00	23.28	32.05	16.78	{ ^{27 94} _{27 90} }	{ ^{7 28} _{6 92} }
22	9.10	17.80	60.33	24.06	50.20	25.81	39.67	23.15	31.81	16.50	27.87	6.58
23	8.87	18.03	60.02	24.20	49.86	25.83	39.32	22.99	31.59	16.20	27.86	6.25
24	8.65	18.26	59.71	24.35	49.50	25.85	38.99	22.82	31.39	15.88	27.86	5.93
25	8.44	18.50	59.38	24.50	49.13	25.86	38.66	22.63	31.20	15.57	27.85	5.62
26	8.23	18.76	59.03	24.66	48.75	25.86	38.35	22.42	31.04	15.27	27.84	5.32
27	8.00	19.02	58.67	24.80	48.36	25.83	38.05	22.21	30.88	14.98	27.83	5.02
28	7.77	19.30	58.31	24.92	47.97	25.78	37.77	22.00	30.73	14.70	27.82	4.72
29	7.52	19.58	57.93	25.02	47.60	25.70	37.50	21.79	30.58	14.42	27.80	4.41
30	7.25	19.85	57.56	25.11	47.23	25.62	37.24	21.58	30.44	14.15	27.78	4.09
31	6.97	20.12			46.89	25.52	36.98	21.39	30.29	13.88	27.76	3.77
32	6.67	20.36			46.56	25.43			30.13	13.61		

Mean R.A. 5^h 59^m 51^s.621 Mean Dec. — 85° 55' 59".07 Sec δ 14'.100 Tan δ — 14.065

260 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

12 B Octantis. Mag. 6.8.

Day.	JULY.		AUGUST.		SEPTEMBER.		OCTOBER.		NOVEMBER.		DECEMBER.	
	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.
	^h ^m	[°]	^h ^m	[°]	^h ^m	[°]	^h ^m	[°]	^h ^m	[°]	^h ^m	[°]
	5 59	85 55	5 59	85 55	5 59	85 55	5 59	85 55	5 59	85 55	5 59	85 55
1	27.76	63.77	30.47	54.20	37.55	47.75	46.43	46.58	54.68	51.08	59.12	59.54
2	27.76	63.42	30.66	53.90	37.85	47.64	46.72	46.67	54.87	51.29	59.19	59.84
3	27.77	63.07	30.85	53.61	38.14	47.55	46.99	46.75	55.07	51.49	59.27	60.14
4	27.78	62.72	31.05	53.35	38.41	47.47	47.25	46.83	55.28	51.69	59.34	60.46
5	27.82	62.37	31.25	53.10	38.67	47.40	47.52	46.89	55.51	51.89	59.42	60.79
6	27.87	62.02	31.46	52.87	38.92	47.31	47.80	46.94	55.73	52.12	59.48	61.14
7	27.92	61.69	31.65	52.66	39.18	47.21	48.08	46.98	55.96	52.36	59.52	61.49
8	27.99	61.36	31.83	52.45	39.44	47.10	48.37	47.03	56.17	52.63	59.56	61.86
9	28.06	61.05	32.00	52.24	39.71	46.98	48.68	47.11	56.38	52.91	59.58	62.23
10	28.12	60.76	32.17	52.01	40.00	46.86	48.99	47.20	56.58	53.21	59.59	62.59
11	28.18	60.48	32.35	51.76	40.30	46.75	49.31	47.31	56.76	53.51	59.58	62.94
12	28.23	60.20	32.53	51.51	40.61	46.66	49.61	47.45	56.92	53.81	59.56	63.28
13	28.27	59.90	32.73	51.25	40.93	46.59	49.91	47.59	57.08	54.11	59.55	63.60
14	28.30	59.59	32.95	50.99	41.26	46.54	50.19	47.75	57.23	54.40	59.53	63.92
15	28.35	59.27	33.18	50.74	41.58	46.51	50.47	47.91	57.37	54.68	59.52	64.23
16	28.41	58.94	33.42	50.51	41.89	46.48	50.74	48.08	57.52	54.96	59.50	64.54
17	28.49	58.59	33.68	50.30	42.19	46.47	51.00	48.23	57.66	55.22	59.48	64.85
18	28.59	58.24	33.93	50.12	42.49	46.47	51.26	48.38	57.80	55.48	59.47	65.16
19	28.71	57.91	34.19	49.94	42.78	46.46	51.51	48.53	57.94	55.75	59.46	65.49
20	28.84	57.60	34.44	49.76	43.06	46.45	51.76	48.67	58.09	56.02	59.45	65.84
21	28.98	57.30	34.68	49.60	43.34	46.44	52.01	48.81	58.25	56.30	59.42	66.21
22	29.11	57.02	34.92	49.44	43.63	46.41	52.28	48.95	58.39	56.60	59.36	66.58
23	29.24	56.74	35.16	49.28	43.93	46.39	52.55	49.11	58.53	56.93	59.29	66.96
24	29.38	56.48	35.40	49.11	44.23	46.36	52.82	49.28	58.65	57.27	59.19	67.32
25	29.51	56.21	35.63	48.94	44.53	46.34	53.09	49.46	58.76	57.62	59.07	67.66
26	29.63	55.94	35.87	48.75	44.84	46.33	53.36	49.65	58.84	57.98	58.96	67.99
27	29.76	55.66	36.12	48.56	45.17	46.34	53.62	49.87	58.90	58.32	58.84	68.30
28	29.88	55.39	36.39	48.38	45.50	46.37	53.87	50.12	58.95	58.65	58.73	68.59
29	30.01	55.10	36.67	48.20	45.82	46.42	54.09	50.37	59.00	58.96	58.63	68.88
30	30.16	54.80	36.96	48.02	46.13	46.49	54.29	50.61	59.06	59.26	58.55	69.17
31	30.31	54.50	37.25	47.87	46.43	46.58	54.49	50.85	59.12	59.54	58.46	69.49
32	30.47	54.20	37.55	47.75			54.68	51.08			58.37	69.81

Mean R.A. 5^h 59^m 51^s.621 Mean Dec. — 85° 55' 59".07 Sec δ 14.100 Tan δ — 14.065

APPARENT PLACES OF STARS, 1924. 261

AT UPPER TRANSIT AT GREENWICH.

A Octantis. Mag. 7.8.

Day.	JANUARY.		FEBRUARY.		MARCH.		APRIL.		MAY.		JUNE.	
	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.
	h m		h m		h m		h m		h m		h m	
	7 35	88 37	7 35	88 38	7 34	88 38	7 34	88 38	7 33	88 38	7 33	88 38
	s	s	s	s	s	s	s	s	s	s	s	s
1	43.76	57.43	36.36	8.20	76.38	16.45	46.49	21.52	75.61	22.03	47.98	18.03
2	43.81	57.81	35.76	8.53	75.45	16.66	45.50	21.58	74.69	21.97	47.22	17.85
3	43.80	58.20	35.16	8.84	74.55	16.86	44.56	21.66	73.76	21.92	46.45	17.68
4	43.72	58.58	34.56	9.14	73.67	17.05	43.60	21.74	72.83	21.87	45.68	17.48
5	43.59	58.95	33.98	9.43	72.81	17.24	42.62	21.83	71.86	21.83	44.90	17.27
6	43.43	59.30	33.43	9.72	71.99	17.45	41.64	21.92	70.87	21.77	44.12	17.04
7	43.27	59.63	32.91	10.00	71.17	17.66	40.64	22.01	69.87	21.70	43.36	16.80
8	43.13	59.96	32.40	10.29	70.34	17.87	39.60	22.09	68.85	21.62	42.64	16.54
9	43.02	60.28	31.88	10.60	69.50	18.08	38.55	22.17	67.82	21.53	41.97	16.27
10	42.93	60.60	31.35	10.91	68.63	18.30	37.46	22.23	66.80	21.42	41.35	16.01
11	42.85	60.92	30.80	11.23	67.73	18.52	36.35	22.28	65.80	21.29	40.77	15.76
12	42.78	61.26	30.20	11.55	66.79	18.73	35.23	22.31	64.84	21.14	40.22	15.53
13	42.69	61.60	29.57	11.88	65.83	18.94	34.12	22.33	63.91	21.00	39.67	15.31
14	42.57	61.96	28.89	12.19	64.83	19.13	33.03	22.33	63.03	20.85	39.11	15.09
15	42.43	62.33	28.17	12.49	63.80	19.31	31.98	22.33	62.19	20.72	38.51	14.88
16	42.25	62.71	27.42	12.79	62.77	19.46	30.96	22.32	61.36	20.60	37.87	14.67
17	42.02	63.08	26.65	13.07	61.73	19.61	29.98	22.31	60.53	20.50	37.21	14.45
18	41.74	63.45	25.87	13.33	60.72	19.74	29.02	22.32	59.66	20.40	36.53	14.20
19	41.42	63.81	25.08	13.58	59.74	19.87	28.06	22.34	58.75	20.30	35.87	13.93
20	41.06	64.16	24.32	13.82	58.79	20.00	27.07	22.37	57.80	20.18	35.26	13.65
21	40.69	64.49	23.59	14.06	57.88	20.14	26.04	22.41	56.82	20.05	34.70	13.35
22	40.30	64.81	22.89	14.31	56.96	20.29	24.97	22.44	55.85	19.90	34.21	13.05
23	39.92	65.12	22.20	14.56	56.03	20.45	23.86	22.45	54.89	19.73	33.77	12.75
24	39.56	65.43	21.50	14.83	55.07	20.61	22.72	22.44	53.98	19.54	33.37	12.46
25	39.23	65.74	20.78	15.11	54.05	20.78	21.59	22.42	53.13	19.33	32.99	12.17
26	38.92	66.06	20.01	15.40	52.98	20.94	20.49	22.37	52.33	19.13	32.62	11.90
27	38.61	66.40	19.17	15.69	51.87	21.08	19.43	22.30	51.58	18.93	32.26	11.64
28	38.27	66.75	18.27	15.97	50.75	21.19	18.42	22.22	50.86	18.74	31.88	11.38
29	37.89	67.11	17.33	16.22	49.64	21.29	17.46	22.15	50.15	18.55	31.49	11.12
30	37.44	67.48	16.38	16.45	48.55	21.38	16.52	22.08	49.44	18.38	31.09	10.86
31	36.92	67.85			47.50	21.45	15.61	22.03	48.72	18.21	30.67	10.58
32	36.36	68.20			46.49	21.52			47.98	18.03		

Mean R.A. 7^h 34^m 31^s.617 Mean Dec. — 88° 37' 55".40 Sec δ 41.889 Tan δ — 41.877

262 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

A Octantis. Mag. 7.8.

Day.	JULY.		AUGUST.		SEPTEMBER.		OCTOBER.		NOVEMBER.		DECEMBER.	
	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.
	^h ^m	^s	^h ^m	^s	^h ^m	^s	^h ^m	^s	^h ^m	^s	^h ^m	^s
	7 33	88 38	7 33	88 37	7 33	88 37	7 34	88 37	7 34	88 37	7 34	88 37
1	30.67	10.58	26.76	60.63	38.74	51.89	1.43	47.13	28.39	47.76	49.19	53.63
2	30.25	10.29	26.92	60.29	39.44	51.67	2.28	47.09	29.11	47.87	49.68	53.87
3	29.84	10.00	27.13	59.96	40.13	51.47	3.10	47.05	29.86	47.97	50.21	54.12
4	29.45	9.68	27.39	59.63	40.78	51.29	3.87	47.01	30.64	48.07	50.77	54.37
5	29.10	9.35	27.69	59.32	41.39	51.11	4.64	46.96	31.45	48.18	51.33	54.64
6	28.79	9.01	28.00	59.03	41.97	50.93	5.42	46.90	32.31	48.29	51.87	54.93
7	28.53	8.68	28.28	58.76	42.54	50.73	6.24	46.82	33.19	48.41	52.38	55.24
8	28.33	8.37	28.53	58.49	43.11	50.52	7.10	46.75	34.07	48.56	52.85	55.55
9	28.17	8.05	28.74	58.23	43.70	50.30	8.01	46.69	34.94	48.73	53.28	55.88
10	28.02	7.75	28.93	57.96	44.34	50.07	8.96	46.63	35.78	48.92	53.66	56.21
11	27.87	7.48	29.11	57.67	45.04	49.85	9.93	46.60	36.59	49.11	54.01	56.53
12	27.68	7.21	29.32	57.37	45.80	49.63	10.90	46.59	37.35	49.31	54.32	56.85
13	{ 27.47 27.23 }	{ 6.94 6.66 }	29.57	57.05	46.60	49.43	11.87	46.60	38.07	49.51	54.61	57.16
14	26.97	6.36	29.87	56.73	47.42	49.26	12.81	46.62	38.77	49.72	54.88	57.46
15	26.72	6.04	30.23	56.41	48.25	49.10	13.72	46.65	39.45	49.91	55.15	57.74
16	26.49	5.71	30.65	56.09	49.08	48.95	14.61	46.68	40.11	50.11	55.42	58.03
17	26.32	5.38	31.12	55.80	49.88	48.81	15.48	46.72	40.76	50.30	55.71	58.31
18	26.22	5.04	31.60	55.52	50.67	48.68	16.32	46.75	41.41	50.48	56.02	58.60
19	26.18	4.69	32.09	55.26	51.44	48.55	17.15	46.78	42.08	50.66	56.35	58.91
20	26.18	4.36	32.58	55.00	52.19	48.42	17.98	46.81	42.77	50.84	56.67	59.24
21	26.22	4.04	33.06	54.75	52.94	48.29	18.81	46.83	43.49	51.03	56.96	59.59
22	26.27	3.72	33.53	54.50	53.68	48.15	19.66	46.85	44.22	51.24	57.20	59.95
23	26.33	3.41	33.98	54.25	54.43	48.00	20.54	46.87	44.95	51.49	57.37	60.32
24	26.38	3.12	34.43	54.00	55.20	47.86	21.46	46.90	45.65	51.75	57.48	60.69
25	26.43	2.83	34.87	53.75	56.00	47.71	22.40	46.95	46.29	52.03	57.53	61.06
26	26.47	2.54	35.31	53.49	56.84	47.57	23.35	47.03	46.87	52.31	57.53	61.41
27	26.50	2.24	35.78	53.22	57.73	47.44	24.30	47.12	47.38	52.60	57.52	61.74
28	26.52	1.94	36.28	52.94	58.66	47.33	25.21	47.23	47.84	52.88	57.53	62.06
29	26.55	1.63	36.82	52.67	59.60	47.25	26.08	47.36	48.28	53.14	57.56	62.37
30	26.59	1.31	37.42	52.40	60.53	47.18	26.89	47.50	48.72	53.39	57.62	62.67
31	26.65	0.97	38.06	52.14	61.43	47.13	27.66	47.64	49.19	53.63	57.71	62.99
32	26.76	0.63	38.74	51.89			28.39	47.76			57.81	63.32

Mean R.A. 7^h 34^m 31^s.617 Mean Dec. — 88° 37' 55".40 Sec δ 41.889 Tan δ — 41.877

APPARENT PLACES OF STARS, 1924. 263

AT UPPER TRANSIT AT GREENWICH.

10 G Octantis. Mag. 6.7

Day.	JANUARY.		FEBRUARY.		MARCH.		APRIL.		MAY.		JUNE.	
	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.
	h m	°	h m	°	h m	°	h m	°	h m	°	h m	°
	10 35	85 41	10 36	85 41	10 35	85 41	10 35	85 42	10 35	85 42	10 35	85 42
1	55.59	34.39	0.87	44.19	61.70	55.22	58.33	6.37	51.93	14.45	43.50	18.50
2	55.85	34.66	0.96	44.58	61.63	55.60	58.16	6.65	51.70	14.65	43.23	18.57
3	56.10	34.95	1.02	44.96	61.56	55.97	57.99	6.94	51.47	14.85	42.96	18.64
4	56.33	35.25	1.08	45.33	61.49	56.33	57.83	7.24	51.23	15.05	42.67	18.70
5	56.55	35.56	1.13	45.68	61.42	56.68	57.67	7.55	50.99	15.25	42.37	18.74
6	56.74	35.86	1.19	46.03	61.36	57.03	57.52	7.86	50.74	15.46	42.06	18.76
7	56.92	36.14	1.26	46.37	61.31	57.39	57.35	8.18	50.49	15.66	41.75	18.78
8	57.10	36.42	1.33	46.71	61.26	57.75	57.18	8.50	50.23	15.86	41.43	18.78
9	57.27	36.69	1.41	47.06	61.21	58.11	57.00	8.82	49.94	16.05	41.13	18.76
10	57.46	36.95	1.49	47.42	61.16	58.49	56.81	9.14	49.65	16.22	40.83	18.72
11	57.66	37.21	1.56	47.80	61.10	58.87	56.60	9.46	49.35	16.38	40.55	18.68
12	57.86	37.47	1.63	48.18	61.02	59.26	56.38	9.77	49.05	16.52	40.29	18.65
13	58.07	37.75	1.70	48.57	60.94	59.64	56.15	10.06	48.76	16.63	40.02	18.62
14	58.27	38.04	1.76	48.97	60.85	60.05	55.91	10.32	48.49	16.74	39.78	18.61
15	58.47	38.35	1.79	49.38	60.74	60.44	55.68	10.57	48.22	16.86	39.53	18.62
16	58.66	38.67	1.82	49.78	60.62	60.81	55.44	10.82	47.96	16.99	39.27	18.64
17	58.85	39.01	1.83	50.18	60.48	61.17	55.23	11.06	47.72	17.12	38.99	18.65
18	59.02	39.35	1.82	50.57	60.34	61.53	55.02	11.31	47.47	17.27	38.69	18.63
19	59.18	39.69	1.80	50.95	60.20	61.86	54.83	11.57	47.22	17.43	38.38	18.60
20	59.33	40.03	1.79	51.32	60.07	62.19	54.63	11.84	46.95	17.60	38.07	18.56
21	59.46	40.38	1.78	51.67	59.95	62.51	54.43	12.12	46.66	17.75	37.77	18.49
22	59.58	40.71	1.78	52.01	59.84	62.84	54.22	12.41	46.36	17.88	37.48	18.39
23	59.70	41.04	1.79	52.37	59.74	63.20	53.99	12.71	46.05	17.99	37.20	18.29
24	59.82	41.35	1.81	52.74	59.64	63.57	53.75	12.99	45.73	18.08	36.94	18.18
25	59.94	41.65	1.82	53.14	59.53	63.96	53.48	13.25	45.43	18.15	36.69	18.07
26	60.07	41.96	1.83	53.54	59.40	64.34	53.21	13.48	45.12	18.20	36.44	17.97
27	60.21	42.29	1.83	53.97	59.25	64.72	52.95	13.70	44.83	18.25	36.19	17.88
28	60.36	42.64	1.80	54.39	59.08	65.08	52.68	13.90	44.55	18.29	35.95	17.78
29	60.51	43.00	1.76	54.82	58.89	65.43	52.42	14.08	44.29	18.33	35.71	17.70
30	60.65	43.39	1.70	55.22	58.70	65.76	52.17	14.26	44.03	18.38	35.47	17.61
31	60.77	43.79			58.51	66.07	51.93	14.45	43.77	18.44	35.21	17.52
32	60.87	44.19			58.33	66.37			43.50	18.50		

Mean R.A. 10^h 35^m 38^s.499 Mean Dec. — 85° 41' 51".23 Sec δ 13.330 Tan δ — 13.292

264 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

10 G Octantis. Mag. 6.7

Day.	JULY.		AUGUST.		SEPTEMBER.		OCTOBER.		NOVEMBER.		DECEMBER.	
	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.
	h m	°	h m	°	h m	°	h m	°	h m	°	h m	°
	10 35	85 42	10 35	85 42	10 35	85 41	10 35	85 41	10 35	85 41	10 35	85 41
1	35.21	17.52	28.52	11.66	25.67	62.12	27.87	53.06	34.47	46.82	42.98	45.95
2	34.94	17.42	28.33	11.39	25.68	61.79	28.05	52.82	34.70	46.72	43.25	46.00
3	34.67	17.32	28.15	11.10	25.71	61.49	28.22	52.59	34.93	46.60	43.52	46.05
4	34.40	17.19	27.99	10.80	25.75	61.19	28.38	52.37	35.17	46.48	43.81	46.10
5	34.12	17.03	27.84	10.50	25.79	60.91	28.52	52.14	35.42	46.34	44.11	46.16
6	33.85	16.86	27.72	10.21	25.82	60.64	28.66	51.89	35.69	46.20	44.42	46.24
7	33.59	16.69	27.61	9.93	25.83	60.35	28.79	51.63	35.98	46.08	44.74	46.34
8	33.35	16.50	27.51	9.66	25.83	60.06	28.94	51.36	36.28	45.98	45.06	46.45
9	33.12	16.32	27.41	9.41	25.83	59.76	29.10	51.08	36.58	45.89	45.36	46.58
10	32.90	16.15	27.31	9.17	25.83	59.44	29.29	50.81	36.88	45.82	45.65	46.72
11	32.70	15.99	27.19	8.94	25.84	59.10	29.49	50.56	37.19	45.76	45.94	46.87
12	32.50	15.84	27.06	8.69	25.88	58.76	29.70	50.31	37.49	45.72	46.22	47.03
13	32.30	15.71	26.92	8.42	25.94	58.41	29.93	50.07	37.79	45.69	46.48	47.18
14	32.08	15.58	26.78	8.13	26.02	58.07	30.15	49.85	38.08	45.66	46.74	47.34
15	31.85	15.44	26.65	7.82	26.10	57.75	30.38	49.64	38.36	45.64	46.99	47.49
16	31.61	15.27	26.53	7.50	26.20	57.44	30.61	49.44	38.63	45.62	47.23	47.63
17	31.36	15.09	26.43	7.17	26.29	57.13	30.84	49.25	38.90	45.59	47.48	47.77
18	31.12	14.88	26.36	6.84	26.39	56.85	31.06	49.07	39.17	45.55	47.74	47.90
19	30.88	14.66	26.30	6.52	26.49	56.57	31.27	48.89	39.43	45.52	48.01	48.05
20	30.65	14.43	26.24	6.21	26.59	56.29	31.47	48.71	39.70	45.48	48.29	48.21
21	30.44	14.19	26.20	5.90	26.68	56.01	31.67	48.52	40.00	45.45	48.58	48.40
22	30.26	13.95	26.15	5.60	26.76	55.73	31.87	48.32	40.31	45.43	48.87	48.61
23	30.09	13.71	26.11	5.32	26.85	55.44	32.09	48.12	40.62	45.43	49.16	48.84
24	29.92	13.49	26.06	5.04	26.93	55.14	32.32	47.91	40.95	45.45	49.43	49.10
25	29.76	13.26	26.01	4.76	27.01	54.82	32.56	47.71	41.27	45.50	49.68	49.36
26	29.59	13.03	25.95	4.46	27.11	54.50	32.82	47.52	41.60	45.57	49.90	49.61
27	29.42	12.82	25.89	4.15	27.23	54.19	33.10	47.36	41.90	45.66	50.12	49.85
28	29.25	12.60	25.83	3.84	27.37	53.88	33.38	47.22	42.19	45.74	50.33	50.08
29	29.07	12.39	25.77	3.51	27.52	53.59	33.67	47.10	42.46	45.82	50.54	50.31
30	28.89	12.16	{ $\frac{25.71}{25.68}$ }	{ $\frac{3.17}{3.12}$ }	27.69	53.31	33.95	47.00	42.72	45.89	50.75	50.52
31	28.71	11.92	25.67	2.45	27.87	53.06	34.22	46.91	42.98	45.95	50.97	50.73
32	28.52	11.66	25.67	2.12			34.47	46.82			51.21	50.95

Mean R.A. 10^h 35^m 38^s.499 Mean Dec. — 85° 41' 51".23 Sec δ 13.330 Tan δ — 13.292

APPARENT PLACES OF STARS, 1924. 265

AT UPPER TRANSIT AT GREENWICH.

η Octantis. Mag. 6.3

Day.	JANUARY.		FEBRUARY.		MARCH.		APRIL.		MAY.		JUNE.	
	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.
	^h ^m ^s II 0 84 10	^h ^m ^s II 0 84 10	^h ^m ^s II 0 84 10	^h ^m ^s II 0 84 10	^h ^m ^s II 0 84 10	^h ^m ^s II 0 84 10	^h ^m ^s II 0 84 10	^h ^m ^s II 0 84 10	^h ^m ^s II 0 84 10	^h ^m ^s II 0 84 10	^h ^m ^s II 0 84 10	^h ^m ^s II 0 84 10
1	3.93	47.42	8.56	56.67	9.97	7.60	8.29	19.07	64.19	27.82	58.35	32.78
2	4.15	47.67	8.65	57.06	9.95	8.00	8.19	19.38	64.03	28.04	58.15	32.87
3	4.36	47.93	8.72	57.43	9.92	8.37	8.09	19.69	63.88	28.27	57.96	32.96
4	4.55	48.21	8.79	57.79	9.89	8.74	7.99	20.01	63.73	28.49	57.75	33.06
5	4.73	48.50	8.86	58.13	9.87	9.09	7.89	20.32	63.57	28.72	57.55	33.14
6	4.90	48.78	8.93	58.47	9.85	9.45	7.80	20.65	63.40	28.96	57.33	33.20
7	5.06	49.04	9.00	58.80	9.83	9.80	7.71	20.99	63.22	29.19	57.10	33.25
8	5.20	49.30	9.08	59.14	9.82	10.17	7.60	21.33	63.04	29.42	56.87	33.27
9	5.35	49.54	9.17	59.49	9.81	10.54	7.49	21.67	62.85	29.63	56.64	33.28
10	5.51	49.78	9.25	59.84	9.79	10.93	7.37	22.01	62.66	29.83	56.43	33.28
11	5.68	50.02	9.33	60.20	9.78	11.32	7.24	22.34	62.46	30.02	56.22	33.28
12	5.84	50.27	9.41	60.57	9.75	11.73	7.10	22.67	62.25	30.19	56.02	33.27
13	6.01	50.53	9.49	60.96	9.72	12.12	6.95	22.98	62.04	30.34	55.84	33.28
14	6.18	50.80	9.55	61.36	9.68	12.52	6.80	23.28	61.84	30.48	55.66	33.30
15	6.35	51.08	9.60	61.76	9.63	12.92	6.65	23.56	61.65	30.62	55.47	33.33
16	6.52	51.38	9.65	62.16	9.56	13.31	6.49	23.83	61.48	30.78	55.29	33.37
17	6.68	51.70	9.69	62.56	9.49	13.67	6.35	24.09	61.31	30.95	55.09	33.41
18	6.84	52.02	9.71	62.95	9.42	14.03	6.22	24.36	61.15	31.12	54.87	33.44
19	6.98	52.35	9.73	63.33	9.34	14.38	6.10	24.64	60.98	31.30	54.65	33.45
20	7.12	52.68	9.75	63.69	9.27	14.73	5.98	24.93	60.79	31.49	54.42	33.44
21	7.24	53.00	9.77	64.05	9.20	15.07	5.85	25.24	60.59	31.67	54.20	33.40
22	7.36	53.33	9.80	64.40	9.14	15.42	5.72	25.56	60.38	31.85	53.98	33.33
23	7.46	53.64	9.82	64.75	9.09	15.78	5.58	25.87	60.17	32.00	53.77	33.26
24	7.57	53.95	9.85	65.13	9.05	16.15	5.41	26.18	59.94	32.13	53.57	33.18
25	7.68	54.25	9.89	65.51	8.99	16.54	5.24	26.46	59.72	32.23	53.38	33.10
26	7.80	54.55	9.94	65.92	8.93	16.94	5.06	26.72	59.51	32.31	53.20	33.02
27	7.93	54.85	9.97	66.34	8.85	17.34	4.88	26.96	59.30	32.38	53.02	32.95
28	8.06	55.18	9.99	66.76	8.75	17.72	4.70	27.18	59.10	32.45	52.84	32.88
29	8.20	55.53	9.99	67.19	8.64	18.08	4.53	27.40	58.91	32.52	52.65	32.82
30	8.33	55.89	9.97	67.60	8.53	18.43	4.36	27.61	58.72	32.60	52.47	32.76
31	8.46	56.28			8.41	18.76	4.19	27.82	58.53	32.69	52.27	32.70
32	8.56	56.67			8.29	19.07			58.35	32.78		

Mean R.A. $10^h 59^m 52^s.649$ Mean Dec. $- 84^\circ 11' 6''.16$ Sec δ 9.870 Tan δ $- 9.819$

266 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

 η Octantis. Mag. 6.3

Day.	JULY.		AUGUST.		SEPTEMBER.		OCTOBER.		NOVEMBER.		DECEMBER.	
	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.
	^h _s ^m _s °		^h _s ^m _s °		^h _s ^m _s °		^h _s ^m _s °		^h _s ^m _s °		^h _s ^m _s °	
	10 59 84 II		10 59 84 II		10 59 84 II		10 59 84 II		10 59 84 II		10 59 84 II	
1	52 ^s 27 32 ^m 70		47 ^s 02 27 ^m 63		44 ^s 36 18 ^m 79		45 ^s 36 9 ^m 20		49 ^s 83 2 ^m 32		56 ^s 08 0 ^m 58	
2	52 ^s 08 32 ^m 64		46 ^s 87 27 ^m 37		44 ^s 34 18 ^m 45		45 ^s 47 8 ^m 95		50 ^s 00 2 ^m 19		56 ^s 28 0 ^m 60	
3	51 ^s 88 32 ^m 56		46 ^s 72 27 ^m 10		44 ^s 32 18 ^m 13		45 ^s 59 8 ^m 71		50 ^s 17 2 ^m 05		56 ^s 49 0 ^m 62	
4	51 ^s 66 32 ^m 45		46 ^s 58 26 ^m 82		44 ^s 33 17 ^m 81		45 ^s 69 8 ^m 47		50 ^s 33 1 ^m 90		56 ^s 72 0 ^m 64	
5	51 ^s 45 32 ^m 33		46 ^s 46 26 ^m 54		44 ^s 33 17 ^m 51		45 ^s 78 8 ^m 22		50 ^s 50 1 ^m 75		56 ^s 94 0 ^m 67	
6	51 ^s 24 32 ^m 20		46 ^s 35 26 ^m 26		44 ^s 34 { 17 24 } 44 34 { 18 26 }		45 ^s 87 7 ^m 97		50 ^s 69 1 ^m 60		57 ^s 17 0 ^m 72	
7	51 ^s 05 32 ^m 05		46 ^s 25 25 ^m 99		44 ^s 34 16 ^m 68		45 ^s 95 7 ^m 70		50 ^s 89 1 ^m 45		57 ^s 41 0 ^m 78	
8	50 ^s 85 31 ^m 90		46 ^s 17 25 ^m 74		44 ^s 32 16 ^m 40		46 ^s 04 7 ^m 41		51 ^s 10 1 ^m 32		57 ^s 65 0 ^m 86	
9	50 ^s 67 31 ^m 74		46 ^s 09 25 ^m 51		44 ^s 30 16 ^m 09		46 ^s 15 7 ^m 12		51 ^s 32 1 ^m 19		57 ^s 89 0 ^m 96	
10	50 ^s 51 31 ^m 59		45 ^s 99 25 ^m 29		44 ^s 29 15 ^m 76		46 ^s 27 6 ^m 83		51 ^s 54 1 ^m 08		58 ^s 12 1 ^m 08	
11	50 ^s 35 31 ^m 45		45 ^s 89 25 ^m 06		44 ^s 28 15 ^m 43		46 ^s 40 6 ^m 55		51 ^s 76 0 ^m 99		58 ^s 35 1 ^m 20	
12	50 ^s 20 31 ^m 33		45 ^s 78 24 ^m 83		44 ^s 28 15 ^m 08		46 ^s 54 6 ^m 28		51 ^s 99 0 ^m 92		58 ^s 56 1 ^m 32	
13	50 ^s 04 31 ^m 22		45 ^s 66 24 ^m 58		44 ^s 30 14 ^m 73		46 ^s 69 6 ^m 02		52 ^s 21 0 ^m 86		58 ^s 77 1 ^m 45	
14	49 ^s 87 31 ^m 12		45 ^s 54 24 ^m 31		44 ^s 32 14 ^m 39		46 ^s 84 5 ^m 78		52 ^s 42 0 ^m 80		58 ^s 97 1 ^m 58	
15	49 ^s 70 31 ^m 00		45 ^s 43 24 ^m 02		44 ^s 36 14 ^m 06		46 ^s 99 5 ^m 55		52 ^s 63 0 ^m 74		59 ^s 16 1 ^m 71	
16	49 ^s 52 30 ^m 87		45 ^s 32 23 ^m 71		44 ^s 41 13 ^m 74		47 ^s 14 5 ^m 34		52 ^s 83 0 ^m 69		59 ^s 36 1 ^m 83	
17	49 ^s 33 30 ^m 71		45 ^s 22 23 ^m 38		44 ^s 47 13 ^m 43		47 ^s 30 5 ^m 13		53 ^s 02 0 ^m 63		59 ^s 55 1 ^m 94	
18	49 ^s 13 30 ^m 54		45 ^s 15 23 ^m 06		44 ^s 53 13 ^m 13		47 ^s 44 4 ^m 92		53 ^s 22 0 ^m 57		59 ^s 75 2 ^m 04	
19	48 ^s 94 30 ^m 34		45 ^s 08 22 ^m 75		44 ^s 58 12 ^m 84		47 ^s 59 4 ^m 71		53 ^s 42 0 ^m 51		59 ^s 96 2 ^m 16	
20	48 ^s 77 30 ^m 13		45 ^s 01 22 ^m 45		44 ^s 64 12 ^m 56		47 ^s 74 4 ^m 50		53 ^s 62 0 ^m 44		60 ^s 18 2 ^m 30	
21	48 ^s 61 29 ^m 92		44 ^s 96 22 ^m 16		44 ^s 69 12 ^m 27		47 ^s 88 4 ^m 29		53 ^s 83 0 ^m 38		60 ^s 41 2 ^m 45	
22	48 ^s 45 29 ^m 70		44 ^s 91 21 ^m 87		44 ^s 73 11 ^m 97		48 ^s 01 4 ^m 07		54 ^s 05 0 ^m 33		60 ^s 64 2 ^m 63	
23	48 ^s 30 29 ^m 48		44 ^s 86 21 ^m 59		44 ^s 77 11 ^m 68		48 ^s 15 3 ^m 85		54 ^s 29 0 ^m 29		60 ^s 86 2 ^m 84	
24	48 ^s 17 29 ^m 27		44 ^s 81 21 ^m 31		44 ^s 81 11 ^m 38		48 ^s 30 3 ^m 62		54 ^s 53 0 ^m 28		61 ^s 08 3 ^m 06	
25	48 ^s 03 29 ^m 08		44 ^s 75 21 ^m 03		44 ^s 85 11 ^m 06		48 ^s 47 3 ^m 40		54 ^s 78 0 ^m 29		61 ^s 28 3 ^m 29	
26	47 ^s 90 28 ^m 88		44 ^s 69 20 ^m 74		44 ^s 90 10 ^m 73		48 ^s 65 3 ^m 18		55 ^s 02 0 ^m 33		61 ^s 47 3 ^m 52	
27	47 ^s 76 28 ^m 68		44 ^s 63 20 ^m 44		44 ^s 97 10 ^m 40		48 ^s 84 2 ^m 99		55 ^s 25 0 ^m 38		61 ^s 65 3 ^m 74	
28	47 ^s 61 28 ^m 48		44 ^s 56 20 ^m 13		45 ^s 05 10 ^m 08		49 ^s 04 2 ^m 82		55 ^s 47 0 ^m 44		61 ^s 83 3 ^m 95	
29	47 ^s 47 28 ^m 29		44 ^s 50 19 ^m 81		45 ^s 14 9 ^m 77		49 ^s 24 2 ^m 68		55 ^s 69 0 ^m 50		62 ^s 00 4 ^m 15	
30	47 ^s 32 28 ^m 08		44 ^s 44 19 ^m 47		45 ^s 24 9 ^m 48		49 ^s 44 2 ^m 56		55 ^s 89 0 ^m 55		62 ^s 17 4 ^m 35	
31	47 ^s 17 27 ^m 86		44 ^s 39 19 ^m 13		45 ^s 36 9 ^m 20		49 ^s 64 2 ^m 44		56 ^s 08 0 ^m 58		62 ^s 35 4 ^m 54	
32	47 ^s 02 27 ^m 63		44 ^s 36 18 ^m 79				49 ^s 83 2 ^m 32				62 ^s 54 4 ^m 73	

Mean R.A. 10^h 59^m 52^s.649 Mean Dec. — 84° 11' 6".16 Sec δ 9.870 Tan δ — 9.819

APPARENT PLACES OF STARS, 1924. 267

AT UPPER TRANSIT AT GREENWICH.

ρ Octantis. Mag. 5.7

Day.	JANUARY.		FEBRUARY.		MARCH.		APRIL.		MAY.		JUNE.	
	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.
	^h ^m	[°]	^h ^m	[°]	^h ^m	[°]	^h ^m	[°]	^h ^m	[°]	^h ^m	[°]
	15 25	84 12	15 25	84 12	15 25	84 12	15 25	84 12	15 25	84 12	15 25	84 13
	^s	["]	^s	["]	^s	["]	^s	["]	^s	["]	^s	["]
1	23.33	34.00	30.76	32.01	37.96	34.86	44.32	42.02	48.21	51.31	49.23	1.50
2	23.57	33.83	31.03	32.06	38.19	35.06	44.47	42.29	48.29	51.61	49.22	1.81
3	23.81	33.68	31.28	32.13	38.40	35.26	44.62	42.55	48.37	51.91	49.22	2.13
4	24.06	33.56	31.53	32.19	38.61	35.45	44.78	42.81	48.46	52.22	49.21	2.46
5	24.31	33.46	31.76	32.24	38.81	35.63	44.95	43.06	48.54	52.55	49.19	2.79
6	24.54	33.37	31.99	32.30	39.02	35.80	45.11	43.32	48.63	52.87	49.15	3.13
7	24.76	33.29	32.21	32.35	39.23	35.97	45.28	43.60	48.72	53.21	49.10	3.47
8	24.97	33.20	32.44	32.38	39.45	36.14	45.45	43.89	48.79	53.55	49.04	3.80
9	25.18	33.10	32.69	32.41	39.67	36.31	45.62	44.19	48.86	53.92	48.97	4.12
10	25.38	33.00	32.94	32.45	39.90	36.49	45.79	44.49	48.92	54.29	48.89	4.42
11	25.59	32.89	33.19	32.49	40.13	36.68	45.95	44.81	48.95	54.65	48.82	4.70
12	25.80	32.77	33.45	32.55	40.37	36.88	46.10	45.14	48.98	55.01	48.75	4.97
13	26.02	32.66	33.71	32.62	40.61	37.10	46.23	45.48	49.00	55.35	48.69	5.24
14	26.25	32.55	33.98	32.70	40.84	37.33	46.35	45.82	49.02	55.68	48.65	5.50
15	26.49	32.45	34.25	32.80	41.06	37.57	46.47	46.15	49.04	55.99	48.61	5.78
16	26.74	32.36	34.51	32.92	41.27	37.83	46.57	46.46	49.08	56.29	48.57	6.07
17	27.00	32.29	34.77	33.05	41.47	38.10	46.68	46.76	49.12	56.59	48.53	6.37
18	27.26	32.23	35.02	33.19	41.66	38.36	46.80	47.05	49.18	56.91	48.48	6.69
19	27.52	32.18	35.25	33.33	41.84	38.61	46.93	47.33	49.23	57.23	48.41	7.01
20	27.77	32.15	35.48	33.46	42.01	38.84	47.07	47.62	49.28	57.57	48.32	7.32
21	28.01	32.14	35.70	33.59	42.19	39.05	47.22	47.93	49.33	57.94	48.21	7.61
22	28.26	32.13	35.92	33.71	42.39	39.27	47.37	48.26	49.37	58.31	48.10	7.89
23	28.49	32.13	36.15	33.81	42.59	39.49	47.51	48.59	49.38	58.67	47.98	8.15
24	28.71	32.12	36.39	33.92	42.81	39.73	47.64	48.95	49.37	59.03	47.86	8.40
25	28.93	32.09	36.64	34.03	43.03	39.97	47.76	49.31	49.36	59.38	47.75	8.63
26	29.15	32.05	36.91	34.16	43.26	40.23	47.85	49.67	49.33	59.71	47.64	8.86
27	29.39	32.01	37.18	34.30	43.47	40.51	47.93	50.03	49.31	60.03	47.54	9.08
28	29.65	31.98	37.45	34.46	43.67	40.82	48.01	50.37	49.28	60.33	47.44	9.31
29	29.92	31.95	37.71	34.65	43.85	41.13	48.07	50.70	49.26	60.61	47.35	9.55
30	30.20	31.95	37.96	34.86	44.02	41.43	48.14	51.01	49.25	60.90	47.26	9.80
31	30.48	31.97			44.18	41.73	48.21	51.31	49.24	61.20	47.16	10.04
32	30.76	32.01			44.32	42.02			49.23	61.50		

Mean R.A. 15^h 25^m 30^s.492 Mean Dec. — 84° 12' 57".78 Sec δ 9.923 Tan δ — 9.872

268 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

 ρ Octantis. Mag. 5.7

Day.	JULY.		AUGUST.		SEPTEMBER.		OCTOBER.		NOVEMBER.		DECEMBER.	
	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.
	^h _s ^m	[°] [']	^h _s ^m	[°] [']	^h _s ^m	[°] [']	^h _s ^m	[°] [']	^h _s ^m	[°] [']	^h _s ^m	[°] [']
	15 25	84 13	15 25	84 13	15 25	84 13	15 25	84 13	15 25	84 12	15 25	84 12
1	47.16	10.04	42.34	15.42	36.15	15.68	30.96	10.85	28.47	62.34	29.89	53.23
2	47.05	10.29	42.13	15.53	35.94	15.57	30.84	10.59	28.48	62.06	29.99	52.98
3	46.93	10.55	41.92	15.63	35.74	15.44	30.74	10.35	28.47	61.78	30.08	52.71
4	46.81	10.81	41.70	15.70	35.56	15.32	30.64	10.12	28.45	61.51	30.18	52.43
5	46.66	11.07	41.49	15.76	35.40	15.19	30.54	9.91	28.42	61.22	30.28	52.15
6	46.51	11.30	41.29	15.79	35.24	15.08	30.44	9.70	28.39	60.92	30.40	51.87
7	46.35	11.52	41.09	15.81	35.08	14.98	30.32	9.49	28.36	60.61	30.53	51.59
8	46.19	11.71	40.92	15.85	34.92	14.89	30.19	9.27	28.35	60.27	30.68	51.31
9	46.03	11.89	40.76	15.89	34.74	14.82	30.05	9.02	28.35	59.93	30.84	51.04
10	45.88	12.05	40.59	15.95	34.54	14.74	29.91	8.76	28.37	59.60	31.00	50.79
11	45.75	12.22	40.43	16.01	34.33	14.64	29.77	8.49	28.40	59.26	31.17	50.55
12	45.63	12.40	40.25	16.09	34.13	14.52	29.65	8.21	28.43	58.94	31.33	50.34
13	45.51	12.59	40.06	16.16	33.93	14.38	29.55	7.91	28.47	58.62	31.48	50.13
14	45.40	12.80	39.85	16.23	33.73	14.21	29.45	7.60	28.52	58.31	31.64	49.93
15	45.28	13.01	39.63	16.27	33.53	14.03	29.37	7.29	$\left\{ \begin{smallmatrix} 28 & 58 \\ 28 & 53 \end{smallmatrix} \right\}$	$\left\{ \begin{smallmatrix} 58 & 07 \\ 57 & 74 \end{smallmatrix} \right\}$	31.79	49.73
16	45.14	13.23	39.41	16.28	33.36	13.84	29.29	6.99	28.67	57.47	31.94	49.52
17	44.98	13.44	39.19	16.27	33.18	13.65	29.23	6.71	28.72	57.20	32.08	49.31
18	44.81	13.64	38.97	16.25	33.02	13.45	29.17	6.43	28.76	56.92	32.22	49.09
19	44.63	13.81	38.76	16.22	32.87	13.26	29.10	6.17	28.80	56.63	32.37	48.87
20	44.44	13.97	38.56	16.18	32.72	13.08	29.03	5.90	28.83	56.33	32.54	48.64
21	44.25	14.11	38.37	16.14	32.57	12.91	28.96	5.64	28.88	56.03	32.72	48.41
22	44.06	14.23	38.17	16.10	32.42	12.74	28.89	5.38	28.93	55.72	32.92	48.19
23	43.88	14.35	37.99	16.07	32.26	12.57	28.81	5.10	29.00	55.40	33.14	47.99
24	43.71	14.45	37.81	16.03	32.09	12.40	28.73	4.83	29.09	55.08	33.37	47.82
25	43.55	14.55	37.62	16.00	31.93	12.23	28.65	4.53	29.20	54.76	33.59	47.66
26	43.39	14.66	37.43	15.98	31.76	12.04	28.58	4.21	29.32	54.46	33.81	47.51
27	43.23	14.78	37.23	15.96	31.58	11.84	28.52	3.88	29.45	54.19	34.02	47.38
28	43.07	14.91	37.02	15.93	31.41	11.62	28.48	3.54	29.58	53.94	34.22	47.26
29	42.91	15.04	36.82	15.89	31.24	11.37	28.46	3.21	29.70	53.70	34.40	47.12
30	42.73	15.17	36.60	15.84	31.09	11.11	28.46	2.90	29.80	53.47	34.57	46.98
31	42.54	15.30	36.37	15.77	30.96	10.85	28.46	2.61	29.89	53.23	34.75	46.83
32	42.34	15.42	36.15	15.68			28.47	2.34			34.94	46.66

Mean R.A. 15^h 25^m 30^s.492 Mean Dec. — 84° 12' 57".78 Sec δ 9.923 Tan δ — 9.872

APPARENT PLACES OF STARS, 1924. 269

AT UPPER TRANSIT AT GREENWICH.

σ Octantis. Mag. 5.5

Day.	JANUARY.		FEBRUARY.		MARCH.		APRIL.		MAY.		JUNE.	
	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.
	^{h m} 19 36 89 12	^{h m} 19 36 89 12	^{h m} 19 36 89 12	^{h m} 19 36 89 12	^{h m} 19 37 89 12	^{h m} 19 37 89 12	^{h m} 19 38 89 12	^{h m} 19 38 89 12	^{h m} 19 39 89 12	^{h m} 19 39 89 12	^{h m} 19 39 89 12	^{h m} 19 39 89 12
1	27.23	31.59	41.05	20.60	15.87	12.42	7.10	7.34	0.08	6.62	48.21	10.30
2	27.10	31.22	42.13	20.27	17.47	12.22	8.73	7.26	1.66	6.66	49.56	10.47
3	27.09	30.84	43.20	19.96	19.00	12.02	10.36	7.18	3.27	6.70	50.93	10.65
4	27.22	30.46	44.22	19.67	20.48	11.84	11.99	7.08	4.92	6.74	52.33	10.84
5	27.45	30.10	45.19	19.39	21.90	11.65	13.65	6.99	6.60	6.79	53.73	11.04
6	27.75	29.74	46.11	19.11	23.29	11.44	15.35	6.89	8.33	6.84	55.11	11.27
7	28.06	29.41	46.99	18.83	24.67	11.22	17.09	6.80	10.10	6.90	56.43	11.51
8	28.35	29.08	47.87	18.53	26.09	11.00	18.88	6.71	11.89	6.97	57.68	11.75
9	28.59	28.76	48.77	18.23	27.55	10.79	20.73	6.63	13.68	7.06	58.84	12.00
10	28.78	28.44	49.70	17.91	29.07	10.57	22.63	6.56	15.44	7.17	59.91	12.25
11	28.93	28.13	50.70	17.59	30.64	10.36	24.55	6.51	17.15	7.29	60.91	12.48
12	29.06	27.80	51.76	17.27	32.27	10.15	26.47	6.47	18.80	7.42	61.88	12.70
13	{ 29 21 } { 29 39 }	{ 27 46 } { 27 10 }	52.89	16.96	33.96	9.94	28.36	6.45	20.36	7.55	62.88	12.91
14	29.61	26.73	54.10	16.65	35.70	9.75	30.22	6.44	21.85	7.68	63.94	13.12
15	29.91	26.37	55.37	16.35	37.48	9.57	32.00	6.44	23.29	7.79	65.07	13.32
16	30.30	26.01	56.70	16.06	39.27	9.42	33.71	6.44	24.73	7.90	66.25	13.52
17	30.77	25.64	58.06	15.79	41.05	9.28	35.36	6.43	26.21	7.99	67.48	13.73
18	31.30	25.28	59.43	15.53	42.75	9.15	36.99	6.40	27.77	8.09	68.71	13.97
19	31.91	24.93	60.76	15.29	44.39	9.02	38.64	6.37	29.41	8.18	69.88	14.23
20	32.58	24.59	62.04	15.05	45.96	8.88	40.37	6.33	31.12	8.29	70.94	14.52
21	33.28	24.27	63.26	14.81	47.50	8.73	42.18	6.29	32.85	8.41	71.91	14.82
22	33.97	23.95	64.44	14.57	49.06	8.57	44.08	6.25	34.56	8.55	72.78	15.11
23	34.63	23.64	65.61	14.31	50.67	8.41	46.03	6.24	36.20	8.72	73.55	15.40
24	35.23	23.34	66.82	14.03	52.36	8.24	48.00	6.25	37.75	8.90	74.26	15.68
25	35.78	23.04	68.11	13.75	54.15	8.07	49.94	6.28	39.20	9.10	74.95	15.95
26	36.31	22.72	69.50	13.46	56.03	7.91	51.81	6.33	40.55	9.29	75.64	16.20
27	36.86	22.38	71.00	13.17	57.96	7.77	53.60	6.39	41.84	9.47	76.34	16.45
28	37.48	22.03	72.60	12.90	59.90	7.65	55.29	6.45	43.10	9.64	77.05	16.70
29	38.21	21.67	74.23	12.65	61.81	7.56	56.92	6.51	44.35	9.82	77.80	16.95
30	39.05	21.30	75.87	12.42	63.65	7.48	58.51	6.57	45.60	9.99	78.57	17.21
31	40.01	20.94			65.41	7.41	60.08	6.62	46.89	10.14	79.36	17.48
32	41.05	20.60			67.10	7.34			48.21	10.30		

Mean R.A. 19^h 38^m 33^s.176 Mean Dec. — 89° 12' 33".10 Sec. δ 72.455 Tan δ — 72.448

270 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

 σ Octantis. Mag. 5.5

Day.	JULY.		AUGUST.		SEPTEMBER.		OCTOBER.		NOVEMBER.		DECEMBER.	
	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.
	^h ^m	[°] [']	^h ^m	[°] [']	^h ^m	[°] [']	^h ^m	[°] [']	^h ^m	[°] [']	^h ^m	[°] [']
	19 40	89 12	19 40	89 12	19 39	89 12	19 38	89 12	19 38	89 12	19 37	89 12
	^s	^s	^s	^s	^s	^s	^s	^s	^s	^s	^s	^s
1	19.36	17.48	28.01	26.94	69.56	35.75	91.43	40.80	44.97	40.52	68.98	34.97
2	20.14	17.76	27.84	27.28	68.40	35.98	89.93	40.86	43.74	40.41	68.15	34.74
3	20.91	18.06	27.57	27.61	67.23	36.19	88.51	40.90	42.48	40.31	67.26	34.51
4	21.64	18.38	27.21	27.94	66.12	36.39	87.17	40.95	41.17	40.22	66.31	34.27
5	22.28	18.70	26.78	28.25	65.08	36.58	85.87	41.01	39.79	40.14	65.33	34.01
6	22.84	19.03	26.32	28.55	64.10	36.76	84.57	41.07	38.33	40.04	64.37	33.73
7	23.29	19.35	25.87	28.82	63.17	36.96	83.21	41.14	36.81	39.93	63.45	33.44
8	23.65	19.66	25.47	29.09	62.25	37.17	81.78	41.22	35.28	39.80	62.60	33.14
9	23.97	19.96	25.14	29.35	61.30	37.40	80.25	41.30	33.76	39.65	61.83	32.82
10	24.27	20.25	24.87	29.62	60.26	37.63	78.64	41.37	32.28	39.48	61.14	32.50
11	24.61	20.52	24.64	29.90	59.13	37.86	76.97	41.42	30.86	39.30	60.52	32.18
12	25.02	20.78	24.39	30.20	57.89	38.08	75.28	41.45	29.51	39.11	59.97	31.87
13	25.49	21.04	24.07	30.51	56.57	38.29	73.60	41.46	28.23	38.91	59.48	31.57
14	26.03	21.32	23.66	30.83	55.20	38.48	71.96	41.45	27.00	38.72	59.02	31.27
15	26.57	21.61	23.13	31.16	53.80	38.66	70.36	41.44	25.83	38.54	58.58	30.98
16	27.08	21.93	22.50	31.48	52.39	38.81	68.81	41.42	24.70	38.35	58.12	30.70
17	27.50	22.25	21.79	31.79	51.01	38.96	67.31	41.38	23.58	38.17	57.65	30.43
18	27.80	22.59	21.02	32.07	49.66	39.10	65.85	41.35	22.47	37.99	57.14	30.15
19	27.99	22.93	20.22	32.34	48.34	39.24	64.42	41.32	21.34	37.82	56.58	29.85
20	28.09	23.27	19.42	32.60	47.06	39.38	62.99	41.31	20.16	37.65	56.01	29.54
21	28.11	23.59	18.64	32.85	45.79	39.52	61.57	41.30	18.92	37.47	55.47	29.21
22	28.08	23.90	17.89	33.09	44.54	39.65	60.14	41.29	17.65	37.27	55.00	28.86
23	28.03	24.20	17.15	33.34	43.29	39.80	58.65	41.29	16.39	37.05	54.64	28.49
24	27.99	24.49	16.44	33.60	42.01	39.96	57.10	41.27	15.16	36.80	54.41	28.12
25	27.97	24.78	15.73	33.85	40.67	40.12	55.49	41.24	14.00	36.53	54.31	27.76
26	27.97	25.07	15.02	34.11	39.27	40.28	53.84	41.19	12.96	36.25	54.31	27.41
27	27.99	25.36	14.29	34.38	37.79	40.43	52.18	41.11	12.03	35.97	54.35	27.07
28	28.02	25.65	13.51	34.67	36.22	40.55	50.55	41.01	11.21	35.70	54.38	26.76
29	28.06	25.95	12.66	34.95	34.61	40.65	49.02	40.90	10.46	35.44	54.37	26.45
30	28.09	26.27	11.72	35.23	33.01	40.74	47.58	40.77	9.74	35.20	54.30	26.16
31	28.09	26.60	10.68	35.50	31.43	40.80	46.23	40.64	8.98	34.97	54.17	25.85
32	28.01	26.94	9.56	35.75			44.97	40.52			53.99	25.52

Mean R.A. 19^h 38^m 33^s.176 Mean Dec. — 89° 12' 33".10 Sec δ 72.455 Tan δ — 72.448

APPARENT PLACES OF STARS, 1924. 271

AT UPPER TRANSIT AT GREENWICH.

44 G Octantis. Mag. 6.3

Day.	JANUARY.		FEBRUARY.		MARCH.		APRIL.		MAY.		JUNE.	
	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.
	^h _s ^m	[°]	^h _s ^m	[°]	^h _s ^m	[°]	^h _s ^m	[°]	^h _s ^m	[°]	^h _s ^m	[°]
	19 41	81 32	19 41	81 32	19 41	81 32	19 42	81 32	19 42	81 32	19 42	81 32
1	54.09	36.36	55.54	25.97	58.92	18.04	3.84	12.83	9.00	11.70	13.81	14.75
2	54.08	36.01	55.65	25.66	59.07	17.84	4.00	12.74	9.15	11.72	13.95	14.90
3	54.09	35.65	55.76	25.38	59.21	17.64	4.16	12.65	9.31	11.74	14.09	15.05
4	54.12	35.29	55.86	25.10	59.36	17.46	4.31	12.56	9.47	11.76	14.23	15.22
5	54.15	34.95	55.95	24.83	59.50	17.27	4.46	12.46	9.64	11.79	14.37	15.40
6	54.19	34.62	56.04	24.56	59.63	17.07	4.63	12.35	9.82	11.82	14.51	15.59
7	54.22	34.31	56.13	24.29	59.76	16.86	4.80	12.24	10.00	11.86	14.65	15.81
8	54.25	34.01	56.21	24.00	59.89	16.64	4.97	12.14	10.18	11.91	14.78	16.04
9	54.27	33.71	56.29	23.71	60.03	16.41	5.16	12.05	10.36	11.98	14.89	16.26
10	54.30	33.41	56.38	23.41	60.17	16.19	5.34	11.97	10.53	12.07	14.99	16.49
11	54.32	33.12	56.48	23.10	60.32	15.98	5.53	11.89	10.70	12.17	15.09	16.70
12	54.33	32.82	56.58	22.79	60.47	15.76	5.72	11.84	10.86	12.29	15.19	16.90
13	54.34	32.49	56.69	22.49	60.64	15.55	5.91	11.82	11.01	12.40	15.30	17.09
14	{ 54.35 }	{ 32.16 }	56.81	22.19	60.81	15.36	6.08	11.80	11.16	12.51	15.41	17.26
15	54.41	31.47	56.93	21.90	60.98	15.18	6.25	11.78	11.30	12.60	15.53	17.44
16	54.45	31.12	57.06	21.61	61.16	15.02	6.42	11.77	11.44	12.69	15.66	17.62
17	54.50	30.78	57.20	21.35	61.34	14.88	6.57	11.74	11.59	12.76	15.79	17.82
18	54.56	30.43	57.33	21.10	61.50	14.75	6.74	11.71	11.74	12.83	15.92	18.04
19	54.62	30.10	57.46	20.86	61.65	14.62	6.90	11.66	11.91	12.90	16.04	18.28
20	54.70	29.78	57.58	20.62	61.80	14.47	7.07	11.60	12.09	12.98	16.15	18.54
21	54.78	29.47	57.70	20.39	61.95	14.32	7.24	11.54	12.27	13.09	16.25	18.80
22	54.85	29.18	57.81	20.15	62.09	14.16	7.44	11.49	12.44	13.21	16.34	19.07
23	54.91	28.89	57.92	19.90	62.25	13.98	7.63	11.46	12.60	13.36	16.42	19.34
24	54.96	28.61	58.04	19.63	62.41	13.80	7.82	11.45	12.76	13.52	16.49	19.59
25	55.02	28.32	58.16	19.35	62.59	13.62	8.02	11.46	12.91	13.69	16.56	19.84
26	55.07	28.01	58.29	19.06	62.77	13.45	8.20	11.49	13.04	13.86	16.63	20.07
27	55.12	27.69	58.43	18.78	62.96	13.31	8.37	11.54	13.16	14.02	16.71	20.30
28	55.18	27.35	58.59	18.51	63.15	13.18	8.54	11.59	13.28	14.18	16.79	20.53
29	55.25	26.99	58.76	18.26	63.34	13.08	8.70	11.63	13.41	14.32	16.87	20.76
30	55.34	26.64	58.92	18.04	63.52	12.99	8.85	11.67	13.54	14.46	16.95	21.00
31	55.44	26.30			63.68	12.91	9.00	11.70	13.67	14.60	17.03	21.25
32	55.54	25.97			63.84	12.83			13.81	14.75		

272 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

44 G Octantis. Mag. 6.3

Day.	JULY.		AUGUST.		SEPTEMBER.		OCTOBER.		NOVEMBER.		DECEMBER.	
	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.
	^h ^m ^s	[°] ['] ["]	^h ^m ^s	[°] ['] ["]	^h ^m ^s	[°] ['] ["]	^h ^m ^s	[°] ['] ["]	^h ^m ^s	[°] ['] ["]	^h ^m ^s	[°] ['] ["]
	19 42	81 32	19 42	81 32	19 42	81 32	19 42	81 32	19 42	81 32	19 42	81 32
1	17·03	21·25	18·14	30·08	16·60	38·50	13·19	43·52	9·01	43·58	5·83	38·66
2	17·12	21·51	18·13	30·40	16·49	38·73	13·05	43·57	8·91	43·49	5·76	38·45
3	17·20	21·79	18·11	30·72	16·39	38·94	12·92	43·62	8·80	43·42	5·69	38·25
4	17·28	22·08	18·08	31·04	16·29	39·12	12·81	43·67	8·69	43·34	5·60	38·03
5	17·36	22·38	18·04	31·34	16·20	39·30	12·70	43·73	8·56	43·26	5·51	37·79
6	17·42	22·69	18·00	31·62	16·13	39·47	12·59	43·80	8·42	43·18	5·42	37·54
7	17·46	22·99	17·97	31·87	16·05	39·66	12·47	43·89	8·28	43·10	5·33	37·27
8	17·50	23·28	17·94	32·12	15·97	39·87	12·34	43·98	8·14	42·99	5·26	36·99
9	17·54	23·55	17·92	32·36	15·89	40·09	12·20	44·07	8·00	42·86	5·20	36·70
10	17·58	23·81	17·91	32·62	15·80	40·32	12·05	44·15	7·87	42·71	5·14	36·40
11	17·62	24·05	17·90	32·88	15·70	40·55	11·89	44·21	7·74	42·55	5·08	36·11
12	17·67	24·29	17·88	33·16	15·59	40·77	11·74	44·25	7·62	42·38	5·04	35·83
13	17·73	24·54	17·86	33·46	15·46	40·98	11·58	44·26	7·50	42·21	5·01	35·54
14	17·79	24·79	17·83	33·77	15·33	41·17	11·43	44·27	7·40	42·03	4·97	35·27
15	17·86	25·07	17·79	34·09	15·20	41·35	11·28	44·27	7·30	41·86	4·94	35·01
16	17·92	25·37	17·73	34·39	15·08	41·50	11·14	44·26	7·20	41·70	4·91	34·75
17	17·97	25·68	17·67	34·68	14·96	41·65	11·01	44·24	7·10	41·54	4·87	34·50
18	18·01	25·99	17·60	34·95	14·84	41·78	10·88	44·22	7·00	41·39	4·82	34·24
19	18·03	26·31	17·53	35·21	14·72	41·92	10·75	44·20	6·90	41·24	4·77	33·97
20	18·05	26·62	17·46	35·46	14·60	42·06	10·64	44·20	6·80	41·09	4·72	33·68
21	18·05	26·93	17·39	35·70	14·49	42·20	10·51	44·20	6·69	40·93	4·67	33·37
22	18·05	27·23	17·33	35·94	14·39	42·33	10·38	44·21	6·57	40·76	4·64	33·04
23	18·06	27·51	17·27	36·18	14·28	42·48	10·25	44·21	6·45	40·56	4·61	32·70
24	18·07	27·78	17·21	36·42	14·16	42·65	10·10	44·20	6·34	40·33	4·60	32·36
25	18·07	28·04	17·15	36·66	14·04	42·81	9·95	44·19	6·24	40·08	4·60	32·02
26	18·08	28·32	17·09	36·91	13·91	42·97	9·80	44·15	6·15	39·83	4·61	31·69
27	18·09	28·59	17·04	37·17	13·77	43·12	9·64	44·09	6·07	39·57	4·63	31·38
28	18·10	28·86	16·97	37·45	13·62	43·24	9·50	44·01	6·00	39·33	4·64	31·09
29	18·11	29·14	16·89	37·72	13·47	43·35	9·36	43·91	5·95	39·09	4·65	30·81
30	18·13	29·44	16·80	37·99	13·33	43·45	9·24	43·80	5·89	38·87	4·65	30·54
31	18·14	29·76	16·71	38·26	13·19	43·52	9·12	43·68	5·83	38·66	4·64	30·26
32	18·14	30·08	16·60	38·50			9·01	43·58			4·62	29·96

Mean R.A. 19^h 42^m 6^s.292 Mean Dec. — 81° 32' 37".25 Sec δ 6.800 Tan δ — 6.726

APPARENT PLACES OF STARS, 1924. 273

AT UPPER TRANSIT AT GREENWICH.

48 G Octantis. Mag. 7.1

Day.	JANUARY.		FEBRUARY.		MARCH.		APRIL.		MAY.		JUNE.	
	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.
	^h ^m 20 24	[°] ['] 84 40	^h ^m 20 24	[°] ['] 84 39	^h ^m 20 24	[°] ['] 84 39	^h ^m 20 24	[°] ['] 84 39	^h ^m 20 24	[°] ['] 84 39	^h ^m 20 24	[°] ['] 84 39
1	25.05	12.54	25.70	61.60	29.74	52.33	36.64	45.22	44.45	42.17	52.25	43.53
2	24.99	12.19	25.81	61.24	29.95	52.06	36.87	45.07	44.69	42.14	52.49	43.62
3	24.95	11.83	25.93	60.89	30.15	51.81	37.09	44.91	44.94	42.10	52.73	43.73
4	24.92	11.47	26.05	60.57	30.34	51.56	37.32	44.76	45.20	42.06	52.97	43.85
5	24.91	11.11	26.16	60.26	30.52	51.32	37.55	44.59	45.45	42.03	53.21	43.99
6	24.91	10.77	26.25	59.96	30.69	51.07	37.78	44.42	45.72	41.99	53.45	44.14
7	24.92	10.44	26.34	59.66	30.86	50.81	38.03	44.26	46.00	41.97	53.69	44.32
8	24.93	10.13	26.42	59.35	31.04	50.54	38.29	44.09	46.28	41.97	53.92	44.50
9	24.92	9.83	26.51	59.02	31.23	50.26	38.56	43.93	46.57	41.98	54.13	44.68
10	24.91	9.53	26.61	58.67	31.43	49.98	38.83	43.78	46.85	42.00	54.32	44.87
11	24.88	9.22	26.71	58.33	31.63	49.70	39.11	43.65	47.12	42.05	54.50	45.05
12	24.86	8.90	26.82	57.98	31.84	49.43	39.40	43.54	47.39	42.11	54.68	45.21
13	24.84	8.57	26.95	57.62	32.06	49.16	39.68	43.44	47.64	42.16	54.87	45.37
14	24.81	8.23	27.09	57.27	32.30	48.90	39.96	43.35	47.88	42.21	55.06	45.50
15	24.80	7.88	27.24	56.93	32.55	48.66	40.22	43.27	48.11	42.26	55.26	45.64
16	24.80	7.52	27.40	56.61	32.79	48.44	40.48	43.19	48.35	42.29	55.48	45.78
17	24.81	7.16	27.57	56.29	33.03	48.23	40.72	43.10	48.58	42.31	55.70	45.95
18	24.84	6.79	27.73	55.99	33.27	48.03	40.96	43.00	48.84	42.32	55.93	46.13
19	24.87	6.43	27.90	55.70	33.49	47.83	41.19	42.89	49.10	42.34	56.15	46.33
20	24.91	6.07	28.05	55.42	33.70	47.63	41.45	42.77	49.38	42.36	56.36	46.55
21	24.96	5.72	28.20	55.14	33.91	47.42	41.71	42.65	49.66	42.40	56.55	46.78
22	25.03	5.39	28.34	54.85	34.11	47.19	42.00	42.53	49.94	42.47	56.72	47.03
23	25.10	5.07	28.47	54.55	34.32	46.96	42.30	42.43	50.22	42.56	56.88	47.27
24	^{25 16} { 25 10 }	^{4 44} { 4 44 }	28.60	54.24	34.55	46.71	42.59	42.35	50.48	42.67	57.02	47.49
25	25.24	4.12	28.75	53.91	34.80	46.47	42.89	42.30	50.73	42.79	57.16	47.71
26	25.27	3.79	28.92	53.58	35.06	46.23	43.18	42.27	50.96	42.91	57.31	47.92
27	25.30	3.45	29.11	53.24	35.33	46.02	43.46	42.25	51.18	43.03	57.45	48.13
28	25.35	3.11	29.32	52.92	35.60	45.83	43.73	42.24	51.39	43.14	57.60	48.34
29	25.41	2.74	29.53	52.62	35.88	45.66	43.97	42.23	51.60	43.25	57.76	48.54
30	25.49	2.36	29.74	52.33	36.15	45.51	44.21	42.20	51.81	43.35	57.92	48.76
31	25.59	1.98			36.40	45.36	44.45	42.17	52.03	43.44	58.08	48.98
32	25.70	1.60			36.64	45.22			52.25	43.53		

Mean R.A. 20^h 24^m 43^s.962 Mean Dec. — 84° 40' 8".67 Sec δ 10.763 Tan δ — 10.717

18—24

(NAUTICAL ALMANAC, 1924.)

T

274 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

48 G Octantis. Mag. 7.1

Day.	JULY.		AUGUST.		SEPTEMBER.		OCTOBER.		NOVEMBER.		DECEMBER.	
	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.
	^h ^m	[°] [']	^h ^m	[°] [']	^h ^m	[°] [']	^h ^m	[°] [']	^h ^m	[°] [']	^h ^m	[°] [']
	20 24	84 39	20 24	84 39	20 24	84 40	20 24	84 40	20 24	84 40	20 24	84 40
	^s	^s	^s	^s	^s	^s	^s	^s	^s	^s	^s	^s
1	58.08	48.98	60.90	57.57	59.60	6.74	54.89	13.16	48.27	14.91	42.46	11.26
2	58.25	49.22	60.93	57.90	59.47	7.01	54.68	13.27	48.08	14.86	42.31	11.08
3	58.41	49.46	60.94	58.25	59.33	7.26	54.49	13.37	47.89	14.83	42.15	10.90
4	58.57	49.73	60.94	58.58	59.19	7.49	54.31	13.46	47.69	14.80	41.98	10.71
5	58.71	50.01	60.92	58.89	59.07	7.71	54.14	13.57	47.48	14.79	41.80	10.51
6	58.84	50.30	60.89	59.18	58.97	7.93	53.97	13.70	47.26	14.77	41.62	10.29
7	58.96	50.59	60.87	59.46	58.88	8.15	53.79	13.84	47.03	14.73	41.46	10.05
8	59.07	50.87	60.86	59.72	58.78	8.39	53.60	13.98	46.80	14.67	41.30	9.80
9	59.16	51.14	60.85	59.99	58.68	8.65	53.39	14.13	46.55	14.59	41.14	9.54
10	59.25	51.39	60.86	60.26	58.56	8.91	53.16	14.26	46.32	14.49	41.01	9.28
11	59.34	51.64	60.88	60.53	58.43	9.18	52.93	14.38	46.09	14.38	40.89	9.00
12	59.45	51.87	60.90	60.82	58.29	9.44	52.69	14.48	45.88	14.26	40.78	8.73
13	59.57	52.10	60.90	61.13	58.12	9.70	52.45	14.57	45.68	14.13	40.68	8.47
14	59.70	52.33	60.89	61.46	57.95	9.95	52.21	14.63	45.48	14.00	40.58	8.22
15	59.83	52.58	60.87	61.79	57.77	10.18	51.99	14.68	45.29	13.87	40.48	7.97
16	59.96	52.86	60.82	62.12	57.60	10.39	51.76	14.73	45.11	13.74	40.38	7.72
17	60.08	53.16	60.76	62.44	57.42	10.58	51.54	14.76	44.93	13.62	40.27	7.48
18	60.18	53.47	60.69	62.74	57.25	10.77	51.33	14.80	44.75	13.51	40.16	7.23
19	60.26	53.78	60.61	63.03	57.08	10.95	51.13	14.84	44.56	13.40	40.04	6.98
20	60.32	54.09	60.53	63.32	56.92	11.13	50.93	14.88	44.37	13.30	39.92	6.72
21	60.37	54.40	60.46	63.59	56.76	11.31	50.73	14.93	44.17	13.18	39.80	6.43
22	60.42	54.70	60.39	63.86	56.61	11.51	50.52	14.98	43.96	13.04	39.68	6.12
23	60.45	54.99	60.32	64.12	56.46	11.71	50.31	15.03	43.75	12.89	39.59	5.79
24	60.49	55.26	60.26	64.39	56.30	11.92	50.09	15.09	43.54	12.72	39.52	5.44
25	60.54	55.53	60.21	64.66	56.13	12.12	49.85	15.13	43.34	12.52	39.47	5.10
26	60.58	55.80	60.15	64.94	55.95	12.33	49.60	15.16	43.16	12.30	39.43	4.77
27	60.63	56.08	60.09	65.23	55.75	12.53	49.35	15.16	42.99	12.08	39.40	4.46
28	60.69	56.35	60.02	65.54	55.54	12.72	49.11	15.14	42.85	11.85	39.38	4.16
29	60.75	56.64	59.94	65.85	55.32	12.89	48.87	15.09	42.71	11.64	39.34	3.88
30	60.80	56.94	59.84	66.15	55.10	13.04	48.65	15.03	42.59	11.44	39.28	3.61
31	60.85	57.24	59.72	66.45	54.89	13.16	48.45	14.97	42.46	11.26	39.22	3.32
32	60.90	57.57	59.60	66.74			48.27	14.91			39.15	3.02

Mean R.A. 20^h 24^m 43^s.962 Mean Dec. — 84° 40' 8".67 Sec δ 10.763 Tan δ — 10.717

APPARENT PLACES OF STARS, 1924. 275

AT UPPER TRANSIT AT GREENWICH.

ν Octantis. Mag. 5.7

Day.	JANUARY.		FEBRUARY.		MARCH.		APRIL.		MAY.		JUNE.	
	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.
	^h ^m		^h ^m		^h ^m		^h ^m		^h ^m		^h ^m	
	22 17 86 21		22 17 86 21		22 17 86 21		22 17 86 20		22 17 86 20		22 17 86 20	
	^s		^s		^s		^s		^s		^s	
1	11.70	35.83	6.85	26.22	7.26	15.09	12.57	64.37	21.17	56.69	31.99	53.01
2	11.43	35.57	6.80	25.83	7.40	14.72	12.80	64.09	21.47	56.51	32.34	52.95
3	11.19	35.29	6.78	25.46	7.53	14.37	13.01	63.80	21.77	56.31	32.70	52.90
4	10.97	34.99	6.76	25.10	7.65	14.02	13.23	63.51	22.08	56.12	33.08	52.86
5	10.77	34.69	6.74	24.75	7.76	13.68	13.44	63.21	22.40	55.92	33.46	52.82
6	10.59	34.39	6.71	24.41	7.85	13.34	13.66	62.91	22.74	55.73	33.85	52.81
7	10.42	34.10	6.68	24.08	7.94	13.00	13.90	62.61	23.09	55.54	34.24	52.81
8	10.26	33.83	6.63	23.74	8.04	12.64	14.15	62.30	23.44	55.36	34.63	52.84
9	10.09	33.56	6.58	23.40	8.13	12.29	14.42	61.98	23.82	55.19	34.99	52.89
10	9.91	33.31	6.53	23.06	8.24	11.92	14.70	61.68	24.21	55.04	35.34	52.93
11	9.72	33.05	6.47	22.69	8.36	11.53	14.99	61.39	24.59	54.91	35.68	52.97
12	9.52	32.79	6.42	22.31	8.51	11.15	15.30	61.10	24.95	54.79	35.99	53.00
13	9.32	32.52	6.39	21.92	8.66	10.77	15.62	60.84	25.31	54.68	36.30	53.02
14	9.12	32.23	6.37	21.53	8.83	10.40	15.93	60.59	25.65	54.57	36.63	53.03
15	8.92	31.92	6.38	21.14	9.02	10.04	16.24	60.35	25.97	54.46	36.97	53.02
16	8.73	31.60	6.40	20.75	9.22	9.67	16.53	60.12	26.29	54.33	37.33	53.01
17	8.55	31.28	6.43	20.35	9.43	9.33	16.80	59.88	26.61	54.20	37.69	53.02
18	8.39	30.95	6.48	19.98	9.64	9.00	17.07	59.64	26.95	54.06	38.07	53.06
19	8.24	30.62	6.54	19.62	9.83	8.68	17.33	59.39	27.30	53.91	38.45	53.11
20	8.12	30.28	6.60	19.26	10.00	8.37	17.59	59.12	27.67	53.77	38.83	53.18
21	8.02	29.93	{ 6.66 6.70 }	{ 18.91 18.97 }	10.16	8.05	17.87	58.85	28.06	53.64	39.19	53.28
22	7.92	29.60	6.73	18.22	10.31	7.72	18.18	58.57	28.46	53.53	39.54	53.38
23	7.82	29.28	6.75	17.87	10.47	7.37	18.51	58.31	28.86	53.44	39.86	53.48
24	7.73	28.97	6.77	17.49	10.64	7.02	18.86	58.05	29.25	53.37	40.16	53.59
25	7.63	28.67	6.80	17.10	10.84	6.66	19.21	57.81	29.63	53.32	40.46	53.70
26	7.51	28.36	6.85	16.69	11.06	6.29	19.57	57.59	29.99	53.29	40.76	53.80
27	7.39	28.05	6.93	16.28	11.30	5.93	19.92	57.40	30.33	53.25	41.06	53.90
28	7.25	27.72	7.02	15.87	11.56	5.58	20.25	57.22	30.67	53.20	41.36	54.00
29	7.12	27.36	7.13	15.47	11.82	5.25	20.57	57.05	31.00	53.15	41.66	54.09
30	7.00	26.99	7.26	15.09	12.08	4.94	20.87	56.87	31.32	53.11	41.97	54.17
31	6.91	26.61			12.33	4.65	21.17	56.69	31.65	53.07	42.29	54.27
32	6.85	26.22			12.57	4.37			31.99	53.01		

Mean R.A. 22^h 17^m 34^s.083 Mean Dec. — 86° 21' 20".28 Sec δ 15.732 Tan δ — 15.701

276 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

 ν Octantis. Mag. 5.7

Day.	JULY.		AUGUST.		SEPTEMBER.		OCTOBER.		NOVEMBER.		DECEMBER.	
	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.
	^h ^m	^s	^h ^m	^s	^h ^m	^s	^h ^m	^s	^h ^m	^s	^h ^m	^s
	22 17	86 20	22 17	86 21	22 17	86 21	22 17	86 21	22 17	86 21	22 17	86 21
1	42.29	54.27	50.27	0.28	53.20	9.39	50.29	18.26	42.49	24.26	32.95	24.93
2	42.63	54.38	50.47	0.57	53.16	9.72	50.07	18.49	42.22	24.34	32.66	24.88
3	42.97	54.51	50.66	0.86	53.11	10.03	49.87	18.71	41.96	24.44	32.36	24.83
4	43.30	54.66	50.82	1.15	53.06	10.33	49.69	18.93	41.69	24.55	32.05	24.78
5	43.63	54.82	50.97	1.43	53.02	10.61	49.52	19.15	41.40	24.67	31.72	24.72
6	43.95	54.98	51.09	1.72	52.99	10.88	49.35	19.38	41.10	24.79	31.38	24.64
7	44.25	55.16	51.20	1.99	52.97	11.15	49.18	19.62	40.77	24.90	31.03	24.54
8	44.52	55.35	51.32	2.25	52.96	11.43	49.01	19.88	40.42	25.01	30.69	24.42
9	44.78	55.53	51.45	2.49	52.95	11.73	48.81	20.15	40.07	25.10	30.35	24.29
10	45.02	55.70	51.60	2.73	52.93	12.05	48.58	20.41	39.71	25.17	30.03	24.14
11	45.27	55.86	51.75	2.97	52.90	12.38	48.34	20.67	39.36	25.22	29.72	23.99
12	45.52	56.01	51.91	3.22	52.85	12.71	48.08	20.91	39.02	25.25	29.43	23.83
13	45.78	56.15	52.07	3.50	52.77	13.04	47.80	21.14	38.68	25.28	29.16	23.67
14	46.06	56.29	52.23	3.80	52.67	13.37	47.53	21.35	38.36	25.30	28.90	23.51
15	46.36	56.45	52.35	4.12	52.55	13.69	47.25	21.55	38.05	25.33	28.64	23.37
16	46.67	56.62	52.46	4.44	52.43	13.99	46.98	21.73	37.74	25.35	28.38	23.23
17	46.98	56.81	52.55	4.76	52.30	14.29	46.72	21.91	37.44	25.36	28.11	23.09
18	47.26	57.03	52.61	5.09	52.18	14.58	46.47	22.09	37.14	25.38	27.84	22.95
19	47.52	57.26	52.65	5.40	52.05	14.85	46.23	22.26	36.84	25.41	27.55	22.81
20	47.76	57.50	52.70	5.70	51.92	15.11	45.98	22.44	36.54	25.44	27.25	22.65
21	47.98	57.74	52.74	5.99	51.81	15.38	45.74	22.62	36.21	25.47	26.94	22.47
22	48.19	57.98	52.78	6.27	51.70	15.65	45.50	22.80	35.86	25.49	26.63	22.27
23	48.39	58.21	52.83	6.55	51.60	15.94	45.25	23.00	35.51	25.49	26.34	22.04
24	48.58	58.43	52.88	6.84	51.49	16.23	44.98	23.20	35.14	25.47	26.07	21.79
25	48.77	58.65	52.94	7.13	51.37	16.53	44.68	23.39	34.77	25.43	25.83	21.53
26	48.97	58.86	53.00	7.42	51.24	16.83	44.37	23.57	34.43	25.36	25.60	21.28
27	49.17	59.07	53.06	7.73	51.09	17.14	44.05	23.73	34.11	25.28	25.40	21.04
28	49.39	59.29	53.13	8.04	50.92	17.45	43.72	23.87	33.80	25.18	25.19	20.80
29	49.61	59.52	53.18	8.37	50.72	17.74	43.39	23.99	33.51	25.08	24.99	20.58
30	49.84	59.76	53.21	8.71	50.51	18.01	43.07	24.09	33.23	25.00	24.78	20.36
31	50.06	60.01	53.22	9.05	50.29	18.26	42.77	24.18	32.95	24.93	24.56	20.15
32	50.27	60.28	53.20	9.39			42.49	24.26			24.32	19.93

Mean R.A. $22^h 17^m 34^s.083$ Mean Dec. $-86^\circ 21' 20''.28$ Sec $\delta 15.732$ Tan $\delta -15.701$

277 APPARENT PLACES OF STARS, 1924

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	α Andromedæ. Mag. 2.2			β Cassiopeïæ. Mag. 2.4			γ Pegasi. Mag. 2.9		
	R.A.		Dec. N.	R.A.		Dec. N.	R.A.		Dec. N.
	h 0	m 4	° 28 ' 40	h 0	m 5	° 58 ' 43	h 0	m 9	° 14 ' 45
Jan.	0.2	27.012 ¹⁴⁹	20.72 ⁹⁷	6.959 ³²⁷	63.91 ⁷⁶	18.774 ¹²⁶	40.72 ⁸⁸		
	10.2	26.863 ¹⁴⁴	19.75 ¹²²	6.632 ³¹⁶	63.15 ¹²⁸	18.648 ¹²¹	39.84 ¹⁰⁰		
	20.2	26.719 ¹³²	18.53 ¹⁴⁴	6.316 ²⁹²	61.87 ¹⁷⁵	18.527 ¹¹²	38.84 ¹⁰⁷		
	30.1	26.587 ¹¹⁵	17.09 ¹⁵⁸	6.024 ²⁵⁶	60.12 ²¹⁵	18.415 ⁹⁷	37.77 ¹¹⁰		
Feb.	9.1	26.472 ⁸⁹	15.51 ¹⁶⁸	5.768 ²⁰⁹	57.97 ²⁴⁶	18.318 ⁷⁶	36.67 ¹⁰⁸		
	19.1	26.383 ⁵⁹	13.83 ¹⁶⁹	5.559 ¹⁴⁸	55.51 ²⁶⁷	18.242 ⁵⁰	35.59 ¹⁰⁰		
	29.1	26.324 ²³	12.14 ¹⁶³	5.411 ⁸¹	52.84 ²⁷⁷	18.192 ¹⁹	34.59 ⁸⁸		
Mar.	10.0	26.301 ¹⁹	10.51 ¹⁴⁹	5.330 ⁶	50.07 ²⁷⁶	18.173 ¹⁸	33.71 ⁷⁰		
	20.0	26.320 ⁶³	9.02 ¹²⁷	5.324 ⁷³	47.31 ²⁶⁴	18.191 ⁵⁷	33.01 ⁴⁷		
	30.0	26.383 ¹¹⁰	7.75 ¹⁰⁰	5.397 ¹⁵³	44.67 ²⁴⁰	18.248 ⁹⁹	32.54 ²⁰		
Apr.	9.0	26.493 ¹⁵⁷	6.75 ⁶⁶	5.550 ²³⁰	42.27 ²⁰⁷	18.347 ¹⁴⁰	32.34 ¹⁰		
	18.9	26.650 ²⁰¹	6.09 ³¹	5.780 ³⁰²	40.20 ¹⁶⁸	18.487 ¹⁸²	32.44 ⁴¹		
	28.9	26.851 ²⁴¹	5.78 ⁹	6.082 ³⁶⁵	38.52 ¹²¹	18.669 ²²⁰	32.85 ⁷³		
May	8.9	27.092 ²⁷⁶	5.87 ⁴⁸	6.447 ⁴¹⁷	37.31 ⁷⁰	18.889 ²⁵³	33.58 ¹⁰⁵		
	18.8	27.368 ³⁰⁴	6.35 ⁸⁷	6.864 ⁴⁵⁷	36.61 ¹⁹	19.142 ²⁸⁰	34.63 ¹³²		
	28.8	27.672 ³²³	7.22 ¹²³	7.321 ⁴⁸⁵	36.42 ³⁵	19.422 ²⁹⁹	35.95 ¹⁵⁷		
June	7.8	27.995 ³³³	8.45 ¹⁵⁵	7.806 ⁴⁹⁸	36.77 ⁸⁸	19.721 ³¹⁰	37.52 ¹⁷⁹		
	17.8	28.328 ³³⁵	10.00 ¹⁸⁵	8.304 ⁴⁹⁶	37.65 ¹³⁶	20.031 ³¹⁴	39.31 ¹⁹⁵		
	27.7	28.663 ³²⁸	11.85 ²⁰⁸	8.800 ⁴⁸³	39.01 ¹⁸²	20.345 ³⁰⁹	41.26 ²⁰⁵		
July	7.7	28.991 ³¹¹	13.93 ²²⁶	9.283 ⁴⁵⁷	40.83 ²²³	20.654 ²⁹⁵	43.31 ²¹¹		
	17.7	29.302 ²⁸⁸	16.19 ²³⁹	9.740 ⁴¹⁹	43.06 ²⁵⁷	20.949 ²⁷⁵	45.42 ²¹²		
	27.7	29.590 ²⁵⁸	18.58 ²⁴⁵	10.159 ³⁷³	45.63 ²⁸⁷	21.224 ²⁴⁸	47.54 ²⁰⁷		
Aug.	6.6	29.848 ²²⁴	21.03 ²⁴⁷	10.532 ³²⁰	48.50 ³¹⁰	21.472 ²¹⁶	49.61 ¹⁹⁷		
	16.6	30.072 ¹⁸⁵	23.50 ²⁴³	10.852 ²⁶¹	51.60 ³²⁵	21.688 ¹⁸¹	51.58 ¹⁸⁴		
	26.6	30.257 ¹⁴⁴	25.93 ²³⁴	11.113 ¹⁹⁹	54.85 ³³⁵	21.869 ¹⁴³	53.42 ¹⁶⁷		
Sept.	5.5	30.401 ¹⁰³	28.27 ²²⁰	11.312 ¹³⁵	58.20 ³³⁷	22.012 ¹⁰⁴	55.09 ¹⁴⁷		
	15.5	30.504 ⁶²	30.47 ²⁰⁴	11.447 ⁷¹	61.57 ³³²	22.116 ⁶⁸	56.56 ¹²⁶		
	25.5	30.566 ²⁴	32.51 ¹⁸⁴	11.518 ⁸	64.89 ³²⁰	22.184 ³²	57.82 ¹⁰⁵		
Oct.	5.5	30.590 ¹¹	34.35 ¹⁶⁰	11.526 ⁵¹	68.09 ³⁰²	22.216 ¹	58.87 ⁸¹		
	15.4	30.579 ⁴³	35.95 ¹³⁵	11.475 ¹⁰⁷	71.11 ²⁷⁸	22.215 ³⁰	59.68 ⁵⁹		
	25.4	30.536 ⁷¹	37.30 ¹⁰⁸	11.368 ¹⁵⁸	73.89 ²⁴⁶	22.185 ⁵⁶	60.27 ³⁶		
Nov.	4.4	30.465 ⁹⁴	38.38 ⁷⁸	11.210 ²⁰⁵	76.35 ²¹⁰	22.129 ⁷⁷	60.63 ¹⁵		
	14.4	30.371 ¹¹³	39.16 ⁴⁸	11.005 ²⁴⁵	78.45 ¹⁶⁶	22.052 ⁹⁴	60.78 ⁶		
	24.3	30.258 ¹²⁹	39.64 ¹⁶	10.760 ²⁷⁹	80.11 ¹¹⁹	21.958 ¹⁰⁷	60.72 ²⁷		
Dec.	4.3	30.129 ¹⁴¹	39.80 ¹⁶	10.481 ³⁰⁴	81.30 ⁶⁷	21.851 ¹¹⁷	60.45 ⁴⁵		
	14.3	29.988 ¹⁴⁷	39.64 ⁴⁷	10.177 ³²²	81.97 ¹³	21.734 ¹²³	60.00 ⁶³		
	24.2	29.841 ¹⁴⁹	39.17 ⁷⁸	9.855 ³²⁸	82.10 ⁴²	21.611 ¹²⁵	59.37 ⁷⁹		
	34.2	29.692	38.39	9.527	81.68	21.486	58.58		
Mean Place	27.321	15.14	6.744	50.30	19.203	39.99			
Sec δ , Tan δ	1.140	+0.547	1.927	+1.647	1.034	+0.263			
L α , L δ	0.00	+0.4	0.00	+0.4	0.00	+0.4			
ω α , ω δ	-0.04	0.0	-0.11	0.0	-0.02	0.0			
AUTHORITY	A. E.		A. E.		A. E.				

278 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	ϵ Ceti. Mag. 3.8		ζ Tucanæ. Mag. 4.3		d Piscium. Mag. 5.6	
	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. N.
	h m 0 15	° ' 1 9 14	h m 0 16	° ' 1 65 18	h m 0 16	° ' 1 7 45
Jan.	0.2 32.717 ¹¹⁹	50.36 ⁶¹	5.54 ⁴⁰	98.30 ⁷¹	40.707 ¹²¹	63.92 ⁸¹
	10.2 32.598 ¹¹⁴	50.97 ⁴⁷	5.14 ³⁸	97.59 ¹²⁷	40.586 ¹¹⁸	63.11 ⁸⁴
	20.2 32.484 ¹⁰⁷	51.44 ²⁹	4.76 ³⁴	96.32 ¹⁷⁹	40.468 ¹⁰⁹	62.27 ⁸⁵
	30.2 32.377 ⁹²	51.73 ¹²	4.42 ²⁹	94.53 ²²⁷	40.359 ⁹⁶	61.42 ⁸¹
Feb.	9.1 32.285 ⁷²	51.85 ⁹	4.13 ²³	92.26 ²⁶⁷	40.263 ⁷⁷	60.61 ⁷⁵
	19.1 32.213 ⁴⁹	51.76 ²⁹	3.90 ¹⁷	89.59 ³⁰²	40.186 ⁵³	59.86 ⁶³
	29.1 32.164 ²⁰	51.47 ⁵³	3.73 ¹⁰	86.57 ³²⁹	40.133 ²⁴	59.23 ⁴⁷
Mar.	10.0 32.144 ¹³	50.94 ⁷⁵	3.63 ³	83.28 ³⁴⁸	40.109 ¹¹	58.76 ²⁸
	20.0 32.157 ⁵⁰	50.19 ¹⁰⁰	3.60 ⁶	79.80 ³⁶⁰	40.120 ⁴⁹	58.48 ⁵
	30.0 32.207 ⁹⁰	49.19 ¹²³	3.66 ¹⁴	76.20 ³⁶⁴	40.169 ⁹⁰	58.43 ²²
Apr.	9.0 32.297 ¹³⁰	47.96 ¹⁴⁵	3.80 ²²	72.56 ³⁶¹	40.259 ¹³¹	58.65 ⁴⁹
	18.9 32.427 ¹⁷⁰	46.51 ¹⁶⁶	4.02 ³⁰	68.95 ³⁴⁸	40.390 ¹⁷¹	59.14 ⁷⁷
	28.9 32.597 ²⁰⁷	44.85 ¹⁸³	4.32 ³⁸	65.47 ³³⁰	40.561 ²¹⁰	59.91 ¹⁰⁶
May	8.9 32.804 ²⁴¹	43.02 ¹⁹⁶	4.70 ⁴⁴	62.17 ³⁰⁴	40.771 ²⁴⁴	60.97 ¹³⁰
	18.9 33.045 ²⁶⁹	41.06 ²⁰⁵	5.14 ⁵¹	59.13 ²⁷⁰	41.015 ²⁷⁰	62.27 ¹⁵⁴
	28.8 33.314 ²⁹¹	39.01 ²⁰⁹	5.65 ⁵⁵	56.43 ²³¹	41.285 ²⁹²	63.81 ¹⁷³
June	7.8 33.605 ³⁰³	36.92 ²⁰⁷	6.20 ⁵⁸	54.12 ¹⁸⁶	41.577 ³⁰⁴	65.54 ¹⁸⁸
	17.8 33.908 ³¹¹	34.85 ²⁰¹	6.78 ⁶¹	52.26 ¹³⁷	41.881 ³¹⁰	67.42 ¹⁹⁸
	27.7 34.219 ³⁰⁷	32.84 ¹⁸⁸	7.39 ⁶²	50.89 ⁸⁴	42.191 ³⁰⁵	69.40 ²⁰¹
July	7.7 34.526 ²⁹⁷	30.96 ¹⁷¹	8.01 ⁵⁹	50.05 ²⁹	42.496 ²⁹⁴	71.41 ²⁰¹
	17.7 34.823 ²⁷⁹	29.25 ¹⁴⁹	8.60 ⁵⁷	49.76 ²⁷	42.790 ²⁷⁵	73.42 ¹⁹⁵
	27.7 35.102 ²⁵⁴	27.76 ¹²⁴	9.17 ⁵³	50.03 ⁸¹	43.065 ²⁵¹	75.37 ¹⁸⁴
Aug.	6.6 35.356 ²²³	26.52 ⁹⁷	9.70 ⁴⁶	50.84 ¹³²	43.316 ²¹⁹	77.21 ¹⁶⁹
	16.6 35.579 ¹⁹⁰	25.55 ⁶⁷	10.16 ³⁹	52.16 ¹⁸⁰	43.535 ¹⁸⁶	78.90 ¹⁵¹
	26.6 35.769 ¹⁵¹	24.88 ³⁹	10.55 ³¹	53.96 ²²⁰	43.721 ¹⁴⁹	80.41 ¹³⁰
Sept.	5.6 35.920 ¹¹³	24.49 ⁹	10.86 ²²	56.16 ²⁵³	43.870 ¹¹²	81.71 ¹⁰⁸
	15.5 36.033 ⁷⁵	24.40 ¹⁸	11.08 ¹²	58.69 ²⁷⁶	43.982 ⁷⁴	82.79 ⁸⁵
	25.5 36.108 ³⁸	24.58 ⁴¹	11.20 ³	61.45 ²⁸⁹	44.056 ⁴⁰	83.64 ⁶²
Oct.	5.5 36.146 ⁴	24.99 ⁶¹	11.23 ⁷	64.34 ²⁹⁰	44.096 ⁷	84.26 ⁴⁰
	15.4 36.150 ²⁶	25.60 ⁷⁶	11.16 ¹⁵	67.24 ²⁷⁹	44.103 ²²	84.66 ¹⁹
	25.4 36.124 ⁵²	26.36 ⁸⁸	11.01 ²³	70.03 ²⁵⁷	44.081 ⁴⁷	84.85 ⁰
Nov.	4.4 36.072 ⁷³	27.24 ⁹⁴	10.78 ²⁹	72.60 ²²⁵	44.034 ⁶⁹	84.85 ¹⁷
	14.4 35.999 ⁹¹	28.18 ⁹⁶	10.49 ³⁵	74.85 ¹⁸⁴	43.965 ⁸⁶	84.68 ³³
	24.3 35.908 ¹⁰³	29.14 ⁹⁴	10.14 ³⁸	76.69 ¹³⁵	43.879 ⁹⁹	84.35 ⁴⁷
Dec.	4.3 35.805 ¹¹³	30.08 ⁸⁷	9.76 ⁴¹	78.04 ⁸⁰	43.780 ¹¹⁰	83.88 ⁵⁷
	14.3 35.692 ¹¹⁷	30.95 ⁸⁰	9.35 ⁴²	78.84 ²³	43.670 ¹¹⁶	83.31 ⁶⁸
	24.3 35.575 ¹¹⁹	31.75 ⁶⁷	8.93 ⁴⁰	79.07 ³⁷	43.554 ¹¹⁸	82.63 ⁷⁷
	34.2 35.456	32.42	8.53	78.70	43.436	81.86
Mean Place	33.356	42.38	7.49	75.77	41.164	65.93
Sec δ , Tan δ	1.013	-0.163	2.395	-2.176	1.009	+0.136
L α , L δ	0.00	+0.4	0.00	+0.4	0.00	+0.4
ω α , ω δ	+0.01	+0.1	+0.15	+0.1	-0.01	+0.1
AUTHORITY	A. E.		A. E.		A. E.	

APPARENT PLACES OF STARS, 1924. 279

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	44 Piscium. Mag. 6.0		β Hydri. Mag. 2.9		α Phœnicis. Mag. 2.4	
	R.A.	Dec. N.	R.A.	Dec. S.	R.A.	Dec. S.
	^h O 21	^m I 30	^h O 21	^m 77 40	^h O 22	^m 42 42
Jan.	0.2 29.866 ^s ₁₁₉	63.32 ^o ₇₅	43.57 ^s ₈₉	80.06 ^o ₉₄	30.859 ^s ₁₉₄	85.88 ^o ₁
	10.2 29.747 ^s ₁₁₆	62.57 ^o ₇₂	42.68 ^s ₈₄	79.12 ^o ₁₅₃	30.665 ^s ₁₈₄	85.87 ^o ₄₆
	20.2 29.631 ^s ₁₀₉	61.85 ^o ₆₅	41.84 ^s ₇₅	77.59 ^o ₂₀₇	30.481 ^s ₁₆₈	85.41 ^o ₉₀
	30.2 29.522 ^s ₉₆	61.20 ^o ₅₆	41.09 ^s ₆₆	75.52 ^o ₂₅₆	30.313 ^s ₁₄₇	84.51 ^o ₁₃₁
Feb.	9.1 29.426 ^s ₇₉	60.64 ^o ₄₅	40.43 ^s ₅₄	72.96 ^o ₂₉₆	30.166 ^s ₁₂₀	83.20 ^o ₁₆₉
	19.1 29.347 ^s ₅₅	60.19 ^o ₂₉	39.89 ^s ₄₁	70.00 ^o ₃₃₀	30.046 ^s ₈₇	81.51 ^o ₂₀₃
	29.1 29.292 ^s ₂₇	59.90 ^o ₁₁	39.48 ^s ₂₆	66.70 ^o ₃₅₄	29.959 ^s ₄₉	79.48 ^o ₂₃₄
Mar.	10.0 29.265 ^s ₇	59.79 ^o ₁₀	39.22 ^s ₁₁	63.16 ^o ₃₇₁	29.910 ^s ₆	77.14 ^o ₂₅₈
	20.0 29.272 ^s ₄₄	59.89 ^o ₃₃	39.11 ^s ₄	59.45 ^o ₃₇₉	29.904 ^s ₄₁	74.56 ^o ₂₇₈
	30.0 29.316 ^s ₈₄	60.22 ^o ₅₉	39.15 ^s ₁₉	55.66 ^o ₃₈₀	29.945 ^s ₉₀	71.78 ^o ₂₉₂
Apr.	9.0 29.400 ^s ₁₂₅	60.81 ^o ₈₅	39.34 ^s ₃₅	51.86 ^o ₃₇₁	30.035 ^s ₁₄₀	68.86 ^o ₃₀₀
	18.9 29.525 ^s ₁₆₅	61.66 ^o ₁₁₀	39.69 ^s ₅₀	48.15 ^o ₃₅₄	30.175 ^s ₁₉₁	65.86 ^o ₃₀₃
	28.9 29.690 ^s ₂₀₄	62.76 ^o ₁₃₄	40.19 ^s ₆₄	44.61 ^o ₃₃₀	30.366 ^s ₂₃₇	62.83 ^o ₂₉₈
May	8.9 29.894 ^s ₂₃₇	64.10 ^o ₁₅₆	40.83 ^s ₇₇	41.31 ^o ₃₀₀	30.603 ^s ₂₈₁	59.85 ^o ₂₈₆
	18.9 30.131 ^s ₂₆₆	65.66 ^o ₁₇₃	41.60 ^s ₈₈	38.31 ^o ₂₆₀	30.884 ^s ₃₁₉	56.99 ^o ₂₆₉
	28.8 30.397 ^s ₂₈₇	67.39 ^o ₁₈₈	42.48 ^s ₉₈	35.71 ^o ₂₁₉	31.203 ^s ₃₄₈	54.30 ^o ₂₄₅
June	7.8 30.684 ^s ₃₀₂	69.27 ^o ₁₉₆	43.46 ^s ₁₀₅	33.52 ^o ₁₆₈	31.551 ^s ₃₇₀	51.85 ^o ₂₁₃
	17.8 30.986 ^s ₃₀₇	71.23 ^o ₂₀₀	44.51 ^s ₁₀₉	31.84 ^o ₁₁₅	31.921 ^s ₃₈₂	49.72 ^o ₁₇₉
	27.7 31.293 ^s ₃₀₄	73.23 ^o ₁₉₈	45.60 ^s ₁₁₀	30.69 ^o ₅₉	32.303 ^s ₃₈₃	47.93 ^o ₁₃₇
July	7.7 31.597 ^s ₂₉₄	75.21 ^o ₁₉₁	46.70 ^s ₁₀₉	30.10 ^o ₂	32.686 ^s ₃₇₅	46.56 ^o ₉₅
	17.7 31.891 ^s ₂₇₇	77.12 ^o ₁₈₀	47.79 ^s ₁₀₄	30.08 ^o ₅₆	33.061 ^s ₃₅₆	45.61 ^o ₄₇
	27.7 32.168 ^s ₂₅₃	78.92 ^o ₁₆₃	48.83 ^s ₉₇	30.64 ^o ₁₁₂	33.417 ^s ₃₂₈	45.14 ^o ₁
Aug.	6.6 32.421 ^s ₂₂₃	80.55 ^o ₁₄₃	49.80 ^s ₈₆	31.76 ^o ₁₆₃	33.745 ^s ₂₉₁	45.15 ^o ₄₈
	16.6 32.644 ^s ₁₉₀	81.98 ^o ₁₂₂	50.66 ^s ₇₃	33.39 ^o ₂₁₁	34.036 ^s ₂₄₉	45.63 ^o ₉₃
	26.6 32.834 ^s ₁₅₃	83.20 ^o ₉₇	51.39 ^s ₅₈	35.50 ^o ₂₅₀	34.285 ^s ₁₉₉	46.56 ^o ₁₃₄
Sept.	5.6 32.987 ^s ₁₁₇	84.17 ^o ₇₂	51.97 ^s ₄₁	38.00 ^o ₂₈₂	34.484 ^s ₁₄₈	47.90 ^o ₁₆₉
	15.5 33.104 ^s ₈₀	84.89 ^o ₄₈	52.38 ^s ₂₂	40.82 ^o ₃₀₂	34.632 ^s ₉₅	49.59 ^o ₁₉₈
	25.5 33.184 ^s ₄₄	85.37 ^o ₂₃	52.60 ^s ₃	43.84 ^o ₃₁₁	34.727 ^s ₄₃	51.57 ^o ₂₁₉
Oct.	5.5 33.228 ^s ₁₂	85.60 ^o ₂	52.63 ^s ₁₅	46.95 ^o ₃₀₉	34.770 ^s ₇	53.76 ^o ₂₃₀
	15.4 33.240 ^s ₁₈	85.62 ^o ₁₇	52.48 ^s ₃₃	50.04 ^o ₂₉₄	34.763 ^s ₅₃	56.06 ^o ₂₃₂
	25.4 33.222 ^s ₄₃	85.45 ^o ₃₃	52.15 ^s ₅₀	52.98 ^o ₂₆₇	34.710 ^s ₉₃	58.38 ^o ₂₂₅
Nov.	4.4 33.179 ^s ₆₅	85.12 ^o ₄₇	51.65 ^s ₆₃	55.65 ^o ₂₃₀	34.617 ^s ₁₂₈	60.63 ^o ₂₀₇
	14.4 33.114 ^s ₈₃	84.65 ^o ₅₈	51.02 ^s ₇₅	57.95 ^o ₁₈₃	34.489 ^s ₁₅₄	62.70 ^o ₁₈₃
	24.3 33.031 ^s ₉₆	84.07 ^o ₆₅	50.27 ^s ₈₄	59.78 ^o ₁₂₈	34.335 ^s ₁₇₄	64.53 ^o ₁₅₀
Dec.	4.3 32.935 ^s ₁₀₆	83.42 ^o ₇₁	49.43 ^s ₈₉	61.06 ^o ₆₈	34.161 ^s ₁₈₇	66.03 ^o ₁₁₂
	14.3 32.829 ^s ₁₁₄	82.71 ^o ₇₃	48.54 ^s ₉₁	61.74 ^o ₇	33.974 ^s ₁₉₄	67.15 ^o ₇₀
	24.3 32.715 ^s ₁₁₇	81.98 ^o ₇₅	47.63 ^s ₉₀	61.81 ^o ₅₇	33.780 ^s ₁₉₄	67.85 ^o ₂₅
	34.2 32.598 ^s	81.23 ^o	46.73 ^s	61.24 ^o	33.586 ^s	68.10 ^o
Mean Place	30.358	67.73	46.97	56.17	31.915	67.38
Sec δ , Tan δ	1.000	+0.027	4.687	-4.579	1.361	-0.923
L α , L δ	0.00	+0.4	-0.01	+0.4	0.00	+0.4
ω α , ω δ	0.00	+0.1	+0.31	+0.1	+0.06	+0.1
AUTHORITY			A. E.		A. E.	

280 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	12 Ceti. Mag. 6.0		ε Andromedæ. Mag. 4.5		δ Andromedæ. Mag. 3.5	
	R.A.	Dec. S.	R.A.	Dec. N.	R.A.	Dec. N.
	^h 0 ^m 26 ^s	[°] 4 ['] 22 ["]	^h 0 ^m 34 ^s	[°] 28 ['] 53 ["]	^h 0 ^m 35 ^s	[°] 30 ['] 26 ["]
Jan. 0.2	9.107 ₁₂₀	43.93 ₆₉	31.974 ₁₅₃	62.02 ₇₂	15.477 ₁₅₇	47.62 ₇₃
10.2	8.987 ₁₁₇	44.62 ₅₈	31.821 ₁₅₅	61.30 ₁₀₁	15.320 ₁₅₈	46.89 ₁₀₂
20.2	8.870 ₁₁₀	45.20 ₄₇	31.666 ₁₄₈	60.29 ₁₂₃	15.162 ₁₅₂	45.87 ₁₂₃
30.2	8.760 ₉₉	45.67 ₃₃	31.518 ₁₃₇	59.06 ₁₄₂	15.010 ₁₃₉	44.64 ₁₄₄
Feb. 9.1	8.661 ₈₁	46.00 ₁₆	31.381 ₁₁₇	57.64 ₁₅₂	14.871 ₁₁₉	43.20 ₁₅₇
19.1	8.580 ₅₈	46.16 ₃	31.264 ₈₉	56.12 ₁₅₈	14.752 ₉₂	41.63 ₁₆₃
29.1	8.522 ₃₁	46.13 ₂₄	31.175 ₅₆	54.54 ₁₅₆	14.660 ₅₇	40.00 ₁₆₂
Mar. 10.1	8.491 ₃	45.89 ₄₆	31.119 ₁₆	52.98 ₁₄₅	14.603 ₁₇	38.38 ₁₅₃
20.0	8.494 ₃₉	45.43 ₆₀	31.103 ₂₉	51.53 ₁₂₉	14.586 ₂₉	36.85 ₁₃₆
30.0	8.533 ₈₀	44.74 ₉₅	31.132 ₇₇	50.24 ₁₀₆	14.615 ₇₈	35.49 ₁₁₄
Apr. 9.0	8.613 ₁₁₉	43.79 ₁₁₈	31.209 ₁₂₅	49.18 ₇₆	14.693 ₁₂₆	34.35 ₈₅
18.9	8.732 ₁₆₁	42.61 ₁₄₁	31.334 ₁₇₃	48.42 ₄₃	14.819 ₁₇₅	33.50 ₅₁
28.9	8.893 ₁₉₉	41.20 ₁₆₂	31.507 ₂₁₇	47.99 ₈	14.994 ₂₁₉	32.99 ₁₅
May 8.9	9.092 ₂₃₃	39.58 ₁₇₈	31.724 ₂₅₆	47.91 ₃₀	15.213 ₂₅₉	32.84 ₂₂
18.9	9.325 ₂₆₂	37.80 ₁₉₂	31.980 ₂₈₈	48.21 ₆₇	15.472 ₂₉₂	33.06 ₆₀
28.8	9.587 ₂₈₅	35.88 ₂₀₀	32.268 ₃₁₃	48.88 ₁₀₃	15.764 ₃₁₇	33.66 ₉₇
June 7.8	9.872 ₃₀₀	33.88 ₂₀₄	32.581 ₃₂₉	49.91 ₁₃₅	16.081 ₃₃₄	34.63 ₁₃₂
17.8	10.172 ₃₀₇	31.84 ₂₀₂	32.910 ₃₃₇	51.26 ₁₆₅	16.415 ₃₄₀	35.95 ₁₆₁
27.8	10.479 ₃₀₆	29.82 ₁₉₅	33.247 ₃₃₄	52.91 ₁₈₉	16.755 ₃₃₉	37.56 ₁₈₈
July 7.7	10.785 ₂₉₇	27.87 ₁₈₂	33.581 ₃₂₃	54.80 ₂₀₉	17.094 ₃₂₈	39.44 ₂₀₉
17.7	11.082 ₂₈₀	26.05 ₁₆₅	33.904 ₃₀₅	56.89 ₂₂₂	17.422 ₃₀₉	41.53 ₂₂₄
27.7	11.362 ₂₅₇	24.40 ₁₄₄	34.209 ₂₈₀	59.11 ₂₃₂	17.731 ₂₈₄	43.77 ₂₃₅
Aug. 6.6	11.619 ₂₂₈	22.96 ₁₂₀	34.489 ₂₄₈	61.43 ₂₃₅	18.015 ₂₅₃	46.12 ₂₃₉
16.6	11.847 ₁₉₆	21.76 ₉₅	34.737 ₂₁₃	63.78 ₂₃₄	18.268 ₂₁₈	48.51 ₂₃₉
26.6	12.043 ₁₅₉	20.81 ₆₆	34.950 ₁₇₆	66.12 ₂₂₇	18.486 ₁₇₉	50.90 ₂₃₄
Sept. 5.6	12.202 ₁₂₂	20.15 ₃₈	35.126 ₁₃₇	68.39 ₂₁₆	18.665 ₁₄₀	53.24 ₂₂₅
15.5	12.324 ₈₅	19.77 ₁₂	35.263 ₉₇	70.55 ₂₀₃	18.805 ₁₀₀	55.49 ₂₁₀
25.5	12.409 ₄₉	19.65 ₁₂	35.360 ₆₀	72.58 ₁₈₅	18.905 ₆₁	57.59 ₁₉₄
Oct. 5.5	12.458 ₁₅	19.77 ₃₃	35.420 ₂₄	74.43 ₁₆₄	18.966 ₂₆	59.53 ₁₇₅
15.5	12.473 ₁₄	20.10 ₅₁	35.444 ₁₀	76.07 ₁₄₂	18.992 ₉	61.28 ₁₅₁
25.4	12.459 ₄₁	20.61 ₆₅	35.434 ₄₀	77.49 ₁₁₇	18.983 ₄₀	62.79 ₁₂₆
Nov. 4.4	12.418 ₆₃	21.26 ₇₄	35.394 ₆₆	78.66 ₉₁	18.943 ₆₇	64.05 ₉₉
14.4	12.355 ₈₁	22.00 ₈₁	35.328 ₈₉	79.57 ₆₃	18.876 ₉₁	65.04 ₇₀
24.3	12.274 ₉₅	22.81 ₈₃	35.239 ₁₁₁	80.20 ₃₃	18.785 ₁₁₂	65.74 ₄₁
Dec. 4.3	12.179 ₁₀₇	23.64 ₈₂	35.128 ₁₂₈	80.53 ₄	18.673 ₁₃₀	66.15 ₉
14.3	12.072 ₁₁₄	24.46 ₇₉	35.000 ₁₄₀	80.57 ₂₇	18.543 ₁₄₄	66.24 ₂₂
24.3	11.958 ₁₁₇	25.25 ₇₂	34.860 ₁₄₉	80.30 ₅₆	18.399 ₁₅₃	66.02 ₅₃
34.2	11.841	25.97	34.711	79.74	18.246	65.49
Mean Place	9.631	37.24	32.093	57.46	15.572	42.56
Sec δ, Tan δ	1.003	-0.077	1.142	+0.552	1.160	+0.588
L α, L δ	0.00	+0.4	0.00	+0.4	0.00	+0.4
ω α, ω δ	+0.01	+0.1	-0.04	+0.1	-0.04	+0.2
AUTHORITY	A. E.		A. N.		A. E.	

APPARENT PLACES OF STARS, 1924. 281

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	α Cassiopeiæ. Mag. 2.2-2.8		β Ceti. Mag. 2.2		δ Piscium. Mag. 4.6	
	R.A.	Dec. N.	R.A.	Dec. S.	R.A.	Dec. N.
	^h 0 ^m 36 ^s	[°] 56 ['] 7	^h 0 ^m 39 ^s	[°] 18 ['] 23	^h 0 ^m 44 ^s	[°] 7 ['] 10
Jan. 0.2	11.428 ²⁹⁹	26.80 ⁴²	45.947 ¹³²	84.35 ⁵⁵	43.928 ¹²³	14.84 ⁷⁵
10.2	11.129 ³⁰⁰	26.38 ⁹²	45.815 ¹³¹	84.90 ³¹	43.805 ¹²⁵	14.09 ⁷⁷
20.2	10.829 ²⁸⁸	25.46 ¹³⁹	45.684 ¹²⁵	85.21 ⁵	43.680 ¹²¹	13.32 ⁷⁷
30.2	10.541 ²⁶⁵	24.07 ¹⁸¹	45.559 ¹¹³	85.26 ²³	43.559 ¹¹³	12.55 ⁷³
Feb. 9.1	10.276 ²²⁸	22.26 ²¹⁵	45.446 ⁹⁷	85.03 ⁴⁹	43.446 ⁹⁹	11.82 ⁶⁷
19.1	10.048 ¹⁸¹	20.11 ²⁴⁰	45.349 ⁷⁵	84.54 ⁷⁶	43.347 ⁷⁷	11.15 ⁵⁵
29.1	9.867 ¹²²	17.71 ²⁵⁵	45.274 ⁴⁶	83.78 ¹⁰³	43.270 ⁵⁰	10.60 ⁴¹
Mar. 10.1	9.745 ⁵⁵	15.16 ²⁶⁰	45.228 ¹⁴	82.75 ¹²⁹	43.220 ¹⁷	10.19 ²³
20.0	9.690 ¹⁸	12.56 ²⁵³	45.214 ²⁴	81.46 ¹⁵³	43.203 ²¹	9.96 ¹
30.0	9.708 ⁹³	10.03 ²³⁷	45.238 ⁶⁵	79.93 ¹⁷⁶	43.224 ⁶²	9.95 ²³
Apr. 9.0	9.801 ¹⁶⁸	7.66 ²¹⁰	45.303 ¹⁰⁷	78.17 ¹⁹⁶	43.286 ¹⁰⁴	10.18 ⁴⁹
18.9	9.969 ²⁴⁰	5.56 ¹⁷⁶	45.410 ¹⁴⁹	76.21 ²¹¹	43.390 ¹⁴⁷	10.67 ⁷⁶
28.9	10.209 ³⁰⁶	3.80 ¹³⁵	45.559 ¹⁹⁰	74.10 ²²⁵	43.537 ¹⁸⁷	11.43 ¹⁰³
May 8.9	10.515 ³⁶²	2.45 ⁸⁹	45.749 ²²⁷	71.85 ²³²	43.724 ²²⁴	12.46 ¹²⁷
18.9	10.877 ⁴⁰⁹	1.56 ⁴¹	45.976 ²⁶⁰	69.53 ²³⁵	43.948 ²⁵⁵	13.73 ¹⁵⁰
28.8	11.286 ⁴⁴⁴	1.15 ⁹	46.236 ²⁸⁶	67.18 ²³¹	44.203 ²⁸⁰	15.23 ¹⁶⁸
June 7.8	11.730 ⁴⁶⁴	1.24 ⁵⁹	46.522 ³⁰⁵	64.87 ²²²	44.483 ²⁹⁸	16.91 ¹⁸³
17.8	12.194 ⁴⁷⁴	1.83 ¹⁰⁷	46.827 ³¹⁵	62.65 ²⁰⁷	44.781 ³⁰⁷	18.74 ¹⁹³
27.8	12.668 ⁴⁷⁰	2.90 ¹⁵²	47.142 ³¹⁸	60.58 ¹⁸⁸	45.088 ³⁰⁸	20.67 ¹⁹⁷
July 7.7	13.138 ⁴⁵³	4.42 ¹⁹³	47.460 ³¹²	58.70 ¹⁶²	45.396 ³⁰¹	22.64 ¹⁹⁶
17.7	13.591 ⁴²⁷	6.35 ²²⁹	47.772 ²⁹⁷	57.08 ¹³³	45.697 ²⁸⁶	24.60 ¹⁹⁰
27.6	14.018 ³⁹¹	8.64 ²⁶⁰	48.069 ²⁷⁶	55.75 ¹⁰⁰	45.983 ²⁶⁶	26.50 ¹⁷⁹
Aug. 6.6	14.409 ³⁴⁷	11.24 ²⁸⁴	48.345 ²⁴⁹	54.75 ⁶⁵	46.249 ²³⁹	28.29 ¹⁶⁵
16.6	14.756 ²⁹⁷	14.08 ³⁰²	48.594 ²¹⁵	54.10 ²⁹	46.488 ²⁰⁸	29.94 ¹⁴⁷
26.6	15.053 ²⁴³	17.10 ³¹⁵	48.809 ¹⁷⁹	53.81 ⁵	46.696 ¹⁷⁴	31.41 ¹²⁶
Sept. 5.6	15.296 ¹⁸⁶	20.25 ³²¹	48.988 ¹⁴¹	53.86 ³⁹	46.870 ¹³⁹	32.67 ¹⁰⁴
15.5	15.482 ¹²⁸	23.46 ³¹⁹	49.129 ¹⁰¹	54.25 ⁶⁹	47.009 ¹⁰³	33.71 ⁸⁰
25.5	15.610 ⁷¹	26.65 ³¹³	49.230 ⁶³	54.94 ⁹⁵	47.112 ⁶⁹	34.51 ⁵⁸
Oct. 5.5	15.681 ¹⁵	29.78 ²⁹⁹	49.293 ²⁷	55.89 ¹¹⁵	47.181 ³⁶	35.09 ³⁶
15.5	15.696 ⁴⁰	32.77 ²⁷⁹	49.320 ⁷	57.04 ¹²⁹	47.217 ⁵	35.45 ¹⁵
25.4	15.656 ⁹⁰	35.56 ²⁵⁴	49.313 ³⁷	58.33 ¹³⁸	47.222 ²¹	35.60 ³
Nov. 4.4	15.566 ¹³⁷	38.10 ²²¹	49.276 ⁶²	59.71 ¹³⁹	47.201 ⁴⁵	35.57 ²⁰
14.4	15.429 ¹⁸¹	40.31 ¹⁸⁴	49.214 ⁸³	61.10 ¹³⁴	47.156 ⁶⁶	35.37 ³⁴
24.3	15.248 ²¹⁹	42.15 ¹⁴¹	49.131 ¹⁰¹	62.44 ¹²⁵	47.090 ⁸⁴	35.03 ⁴⁶
Dec. 4.3	15.029 ²⁵²	43.56 ⁹⁵	49.030 ¹¹⁴	63.69 ¹⁰⁹	47.006 ⁹⁸	34.57 ⁵⁷
14.3	14.777 ²⁷⁷	44.51 ⁴⁴	48.916 ¹²⁴	64.78 ⁹⁰	46.908 ¹⁰⁹	34.00 ⁶⁴
24.3	14.500 ²⁹⁴	44.95 ⁸	48.792 ¹²⁹	65.68 ⁶⁹	46.799 ¹¹⁹	33.36 ⁷⁰
34.2	14.206	44.87	48.663	66.37	46.680	32.66
Mean Place	11.003	14.77	46.529	72.33	44.227	18.09
Sec δ , Tan δ	1.794	+1.489	1.054	-0.333	1.008	+0.126
L α , L δ	+0.01	+0.4	0.00	+0.4	0.00	+0.4
ω α , ω δ	-0.10	+0.2	+0.02	+0.2	-0.01	+0.2
AUTHORITY	A. E.		A. E.		A. N.	

282 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	20 Ceti. Mag. 4·9		γ Cassiopeiæ. Mag. 2·3		μ Andromedæ. Mag. 3·9	
	R.A.	Dec. S.	R.A.	Dec. N.	R.A.	Dec. N.
	^h ^m 0 49	[°] ['] 1 33	^h ^m 0 52	[°] ['] 60 18	^h ^m 0 52	[°] ['] 38 5
Jan. 0·3	6·968 ⁸ ₁₂₂	29·88 ₇₃	7·18 ⁸ ₃₅	32·18 ¹³ ₁₃	31·849 ¹⁸² ₁₈₂	21·42 ⁵¹ ₅₁
10·2	6·846 ¹²⁴ ₁₂₄	30·61 ₆₄	6·83 ³⁵ ₃₅	32·05 ⁶⁸ ₆₈	31·667 ¹⁸⁶ ₁₈₆	20·91 ⁸⁶ ₈₆
20·2	6·722 ¹²¹ ₁₂₁	31·25 ₅₅	6·48 ³⁴ ₃₄	31·37 ¹¹⁹ ₁₁₉	31·481 ¹⁸³ ₁₈₃	20·05 ¹¹⁸ ₁₁₈
30·2	6·601 ¹¹³ ₁₁₃	31·80 ₄₃	6·14 ³³ ₃₃	30·18 ¹⁶⁴ ₁₆₄	31·298 ¹⁷² ₁₇₂	18·87 ¹⁴⁶ ₁₄₆
Feb. 9·1	6·488 ⁹⁹ ₉₉	32·23 ₂₉	5·81 ²⁸ ₂₈	28·54 ²⁰⁵ ₂₀₅	31·126 ¹⁵³ ₁₅₃	17·41 ¹⁶⁶ ₁₆₆
19·1	6·389 ⁷⁸ ₇₈	32·52 ₁₂	5·53 ²⁴ ₂₄	26·49 ²³⁵ ₂₃₅	30·973 ¹²⁴ ₁₂₄	15·75 ¹⁸¹ ₁₈₁
29·1	6·311 ⁵³ ₅₃	32·64 ₈	5·29 ¹⁷ ₁₇	24·14 ²⁵⁶ ₂₅₆	30·849 ⁸⁷ ₈₇	13·94 ¹⁸⁷ ₁₈₇
Mar. 10·1	6·258 ²¹ ₂₁	32·56 ₂₉	5·12 ¹⁰ ₁₀	21·58 ²⁶⁶ ₂₆₆	30·762 ⁴⁴ ₄₄	12·07 ¹⁸⁵ ₁₈₅
20·0	6·237 ¹⁶ ₁₆	32·27 ₅₂	5·02 ¹ ₁	18·92 ²⁶⁵ ₂₆₅	30·718 ⁷ ₇	10·22 ¹⁷⁴ ₁₇₄
30·0	6·253 ⁵⁶ ₅₆	31·75 ₇₇	5·01 ⁷ ₇	16·27 ²⁵⁴ ₂₅₄	30·725 ⁶⁰ ₆₀	8·48 ¹⁵⁶ ₁₅₆
Apr. 9·0	6·309 ⁹⁸ ₉₈	30·98 ¹⁰⁰ ₁₀₀	5·08 ¹⁵ ₁₅	13·73 ²³¹ ₂₃₁	30·785 ¹¹⁴ ₁₁₄	6·92 ¹³⁰ ₁₃₀
19·0	6·407 ¹³⁹ ₁₃₉	29·98 ¹²⁵ ₁₂₅	5·23 ²⁴ ₂₄	11·42 ²⁰² ₂₀₂	30·899 ¹⁶⁹ ₁₆₉	5·62 ⁹⁸ ₉₈
28·9	6·546 ¹⁸¹ ₁₈₁	28·73 ₁₄₆	5·47 ³¹ ₃₁	9·40 ¹⁶³ ₁₆₃	31·068 ²¹⁸ ₂₁₈	4·64 ⁶² ₆₂
May 8·9	6·727 ²¹⁷ ₂₁₇	27·27 ₁₆₆	5·78 ³⁸ ₃₈	7·77 ¹¹⁹ ₁₁₉	31·286 ²⁶⁴ ₂₆₄	4·02 ²³ ₂₃
18·9	6·944 ²⁴⁹ ₂₄₉	25·61 ₁₈₂	6·16 ⁴⁴ ₄₄	6·58 ⁷² ₇₂	31·550 ³⁰³ ₃₀₃	3·79 ¹⁷ ₁₇
28·8	7·193 ²⁷⁵ ₂₇₅	23·79 ₁₉₄	6·60 ⁴⁷ ₄₇	5·86 ²² ₂₂	31·853 ³³² ₃₃₂	3·96 ⁵⁸ ₅₈
June 7·8	7·468 ²⁹³ ₂₉₃	21·85 ₂₀₀	7·07 ⁵¹ ₅₁	5·64 ²⁹ ₂₉	32·185 ³⁵² ₃₅₂	4·54 ⁹⁶ ₉₆
17·8	7·761 ³⁰⁴ ₃₀₄	19·85 ₂₀₁	7·58 ⁵² ₅₂	5·93 ⁷⁸ ₇₈	32·537 ³⁶³ ₃₆₃	5·50 ¹³³ ₁₃₃
27·8	8·065 ³⁰⁶ ₃₀₆	17·84 ₁₉₇	8·10 ⁵² ₅₂	6·71 ¹²⁵ ₁₂₅	32·900 ³⁶⁵ ₃₆₅	6·83 ¹⁶⁶ ₁₆₆
July 7·7	8·371 ³⁰¹ ₃₀₁	15·87 ₁₈₉	8·62 ⁵¹ ₅₁	7·96 ¹⁷⁰ ₁₇₀	33·265 ³⁵⁶ ₃₅₆	8·49 ¹⁹³ ₁₉₃
17·7	8·672 ²⁸⁸ ₂₈₈	13·98 ₁₇₄	9·13 ⁴⁸ ₄₈	9·66 ²⁰⁹ ₂₀₉	33·621 ³³⁹ ₃₃₉	10·42 ²¹⁷ ₂₁₇
27·7	8·960 ²⁶⁷ ₂₆₇	12·24 ₁₅₆	9·61 ⁴⁵ ₄₅	11·75 ²⁴⁴ ₂₄₄	33·960 ³¹⁵ ₃₁₅	12·59 ²³⁵ ₂₃₅
Aug. 6·7	9·227 ²⁴¹ ₂₄₁	10·68 ₁₃₃	10·06 ⁴¹ ₄₁	14·19 ²⁷³ ₂₇₃	34·275 ²⁸⁵ ₂₈₅	14·94 ²⁴⁷ ₂₄₇
16·6	9·468 ²¹² ₂₁₂	9·35 ₁₀₉	10·47 ³⁵ ₃₅	16·92 ²⁹⁷ ₂₉₇	34·560 ²⁴⁸ ₂₄₈	17·41 ²⁵⁴ ₂₅₄
26·6	9·680 ¹⁷⁸ ₁₇₈	8·26 ₈₃	10·82 ³⁰ ₃₀	19·89 ³¹³ ₃₁₃	34·808 ²¹⁰ ₂₁₀	19·95 ²⁵⁶ ₂₅₆
Sept. 5·6	9·858 ¹⁴³ ₁₄₃	7·43 ₅₆	11·12 ²³ ₂₃	23·02 ³²⁴ ₃₂₄	35·018 ¹⁷⁰ ₁₇₀	22·51 ²⁵³ ₂₅₃
15·5	10·001 ¹⁰⁷ ₁₀₇	6·87 ₂₉	11·35 ¹⁷ ₁₇	26·26 ³²⁸ ₃₂₈	35·188 ¹²⁷ ₁₂₇	25·04 ²⁴⁴ ₂₄₄
25·5	10·108 ⁷² ₇₂	6·58 ₅	11·52 ¹¹ ₁₁	29·54 ³²⁵ ₃₂₅	35·315 ⁸⁷ ₈₇	27·48 ²³² ₂₃₂
Oct. 5·5	10·180 ³⁹ ₃₉	6·53 ₁₈	11·63 ⁵ ₅	32·79 ³¹⁶ ₃₁₆	35·402 ⁴⁷ ₄₇	29·80 ²¹⁶ ₂₁₆
15·5	10·219 ⁹ ₉	6·71 ₃₇	11·68 ² ₂	35·95 ³⁰⁰ ₃₀₀	35·449 ⁹ ₉	31·96 ¹⁹⁶ ₁₉₆
25·4	10·228 ¹⁹ ₁₉	7·08 ₅₂	11·66 ⁷ ₇	38·95 ²⁷⁸ ₂₇₈	35·458 ²⁶ ₂₆	33·92 ¹⁷² ₁₇₂
Nov. 4·4	10·209 ⁴³ ₄₃	7·60 ₆₅	11·59 ¹⁴ ₁₄	41·73 ²⁴⁹ ₂₄₉	35·432 ⁵⁹ ₅₉	35·64 ¹⁴⁵ ₁₄₅
14·4	10·166 ⁶⁵ ₆₅	8·25 ₇₂	11·45 ¹⁹ ₁₉	44·22 ²¹² ₂₁₂	35·373 ⁸⁹ ₈₉	37·09 ¹¹⁵ ₁₁₅
24·4	10·101 ⁸² ₈₂	8·97 ₇₈	11·26 ²³ ₂₃	46·34 ¹⁷² ₁₇₂	35·284 ¹¹⁶ ₁₁₆	38·24 ⁸² ₈₂
Dec. 4·3	10·019 ⁹⁷ ₉₇	9·75 ₇₉	10·03 ²⁸ ₂₈	48·06 ¹²⁵ ₁₂₅	35·168 ¹⁴⁰ ₁₄₀	39·06 ⁴⁷ ₄₇
14·3	9·922 ¹⁰⁸ ₁₀₈	10·54 ₇₈	10·75 ³¹ ₃₁	49·31 ⁷⁵ ₇₅	35·028 ¹⁵⁹ ₁₅₉	39·53 ¹¹ ₁₁
24·3	9·814 ¹¹⁷ ₁₁₇	11·32 ₇₄	10·44 ³⁴ ₃₄	50·06 ²¹ ₂₁	34·869 ¹⁷³ ₁₇₃	39·64 ²⁷ ₂₇
34·2	9·697	12·06	10·10	50·27	34·696	39·37
Mean Place	7·326	23·36	6·45	19·93	31·720	14·68
Sec δ, Tan δ	1·000	−0·027	2·019	+1·754	1·271	+0·784
L α, L δ	0·00	+0·4	+0·01	+0·4	0·00	+0·4
ω α, ω δ	0·00	+0·2	−0·11	+0·2	−0·05	+0·2
AUTHORITY			A. E.		A. E.	

APPARENT PLACES OF STARS, 1924. 283

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	α Sculptoris. Mag. 4.4		ϵ Piscium. Mag. 4.5		ζ^2 Piscium. Mag. 5.7	
	R.A.	Dec. S.	R.A.	Dec. N.	R.A.	Dec. N.
	^h 0 ^m 54	[°] 29 ['] 45	^h 0 ^m 58	[°] 7 ['] 28	^h 1 ^m 1	[°] 14 ['] 32
Jan. 0.3	56.004 ¹⁵⁸	81.56 ⁴⁹	59.597 ¹²⁴	48.98 ⁷³	4.311 ¹²⁹	14.41 ⁶⁹
10.2	55.846 ¹⁵⁷	82.05 ¹⁴	59.473 ¹²⁸	48.25 ⁷⁴	4.182 ¹³⁴	13.72 ⁷⁹
20.2	55.689 ¹⁵²	82.19 ²³	59.345 ¹²⁸	47.51 ⁷⁴	4.048 ¹³⁴	12.93 ⁸⁶
30.2	55.537 ¹⁴¹	81.96 ⁶⁰	59.217 ¹²¹	46.77 ⁷¹	3.914 ¹²⁸	12.07 ⁹⁰
Feb. 9.1	55.396 ¹²⁴	81.36 ⁹⁵	59.096 ¹⁰⁸	46.06 ⁶⁵	3.786 ¹¹⁵	11.17 ⁹⁰
19.1	55.272 ¹⁰²	80.41 ¹²⁹	58.988 ⁸⁹	45.41 ⁵⁴	3.671 ⁹⁵	10.27 ⁸⁶
29.1	55.170 ⁷²	79.12 ¹⁶⁰	58.899 ⁶³	44.87 ⁴¹	3.576 ⁶⁸	9.41 ⁷⁷
Mar. 10.1	55.098 ³⁸	77.52 ¹⁸⁸	58.836 ³¹	44.46 ²³	3.508 ³⁵	8.64 ⁶³
20.0	55.060 ²	75.64 ²¹⁴	58.805 ⁷	44.23 ²	3.473 ⁴	8.01 ⁴⁵
30.0	55.062 ⁴⁶	73.50 ²³⁵	58.812 ⁴⁷	44.21 ²⁰	3.477 ⁴⁶	7.56 ²²
Apr. 9.0	55.108 ⁹⁰	71.15 ²⁵²	58.859 ⁹⁰	44.41 ⁴⁶	3.523 ⁹⁰	7.34 ⁴
19.0	55.198 ¹³⁷	68.63 ²⁶⁵	58.949 ¹³⁴	44.87 ⁷³	3.613 ¹³⁵	7.38 ³¹
28.9	55.335 ¹⁸²	65.98 ²⁷¹	59.083 ¹⁷⁵	45.60 ⁹⁸	3.748 ¹⁷⁹	7.69 ⁵⁹
May 8.9	55.517 ²²³	63.27 ²⁷³	59.258 ²¹³	46.58 ¹²³	3.927 ²¹⁷	8.28 ⁸⁸
18.9	55.740 ²⁵⁹	60.54 ²⁶⁸	59.471 ²⁴⁶	47.81 ¹⁴⁵	4.144 ²⁵²	9.16 ¹¹⁵
28.8	55.999 ²⁹²	57.86 ²⁵⁶	59.717 ²⁷⁴	49.26 ¹⁶⁵	4.396 ²⁷⁸	10.31 ¹⁴⁰
June 7.8	56.291 ³¹⁴	55.30 ²³⁸	59.991 ²⁹²	50.91 ¹⁷⁸	4.674 ²⁹⁹	11.71 ¹⁶⁰
17.8	56.605 ³³⁰	52.92 ²¹⁴	60.283 ³⁰⁵	52.69 ¹⁹⁰	4.973 ³¹¹	13.31 ¹⁷⁷
27.8	56.935 ³³⁷	50.78 ¹⁸⁴	60.588 ³⁰⁸	54.59 ¹⁹⁴	5.284 ³¹³	15.08 ¹⁸⁹
July 7.7	57.272 ³³³	48.94 ¹⁵⁰	60.896 ³⁰³	56.53 ¹⁹⁴	5.597 ³⁰⁹	16.97 ¹⁹⁵
17.7	57.605 ³²²	47.44 ¹¹²	61.199 ²⁹¹	58.47 ¹⁸⁹	5.906 ²⁹⁷	18.92 ¹⁹⁸
27.7	57.927 ³⁰³	46.32 ⁷⁰	61.490 ²⁷³	60.36 ¹⁷⁹	6.203 ²⁷⁷	20.90 ¹⁹⁴
Aug. 6.7	58.230 ²⁷⁶	45.62 ²⁸	61.763 ²⁴⁸	62.15 ¹⁶⁵	6.480 ²⁵³	22.84 ¹⁸⁶
16.6	58.506 ²⁴³	45.34 ¹⁷	62.011 ²¹⁸	63.80 ¹⁴⁸	6.733 ²²³	24.70 ¹⁷⁴
26.6	58.749 ²⁰⁵	45.51 ⁵⁶	62.229 ¹⁸⁷	65.28 ¹²⁷	6.956 ¹⁹⁰	26.44 ¹⁶⁰
Sept. 5.6	58.954 ¹⁶⁵	46.07 ⁹⁵	62.416 ¹⁵²	66.55 ¹⁰⁴	7.146 ¹⁵⁷	28.04 ¹⁴¹
15.5	59.119 ¹²²	47.02 ¹²⁹	62.568 ¹¹⁸	67.59 ⁸²	7.303 ¹²¹	29.45 ¹²²
25.5	59.241 ⁷⁹	48.31 ¹⁵⁵	62.686 ⁸³	68.41 ⁶⁰	7.424 ⁸⁷	30.67 ¹⁰¹
Oct. 5.5	59.320 ³⁹	49.86 ¹⁷⁷	62.769 ⁵⁰	69.01 ³⁷	7.511 ⁵⁴	31.68 ⁸¹
15.5	59.359 ⁰	51.63 ¹⁸⁹	62.819 ²⁰	69.38 ¹⁷	7.565 ²³	32.49 ⁵⁹
25.4	59.359 ³⁴	53.52 ¹⁹³	62.839 ⁸	69.55 ²	7.588 ⁶	33.08 ³⁹
Nov. 4.4	59.325 ⁶⁶	55.45 ¹⁸⁹	62.831 ³³	69.53 ¹⁸	7.582 ³²	33.47 ²¹
14.4	59.259 ⁹²	57.34 ¹⁷⁷	62.798 ⁵⁶	69.35 ³³	7.550 ⁵⁵	33.68 ²
24.4	59.167 ¹¹⁴	59.11 ¹⁵⁸	62.742 ⁷⁶	69.02 ⁴⁴	7.495 ⁷⁵	33.70 ¹⁵
Dec. 4.3	59.053 ¹³¹	60.69 ¹³³	62.666 ⁹²	68.58 ⁵⁴	7.420 ⁹⁵	33.55 ³¹
14.3	58.922 ¹⁴⁴	62.02 ¹⁰⁴	62.574 ¹⁰⁷	68.04 ⁶²	7.325 ¹⁰⁹	33.24 ⁴⁶
24.3	58.778 ¹⁵²	63.06 ⁶⁹	62.467 ¹¹⁷	67.42 ⁶⁹	7.216 ¹²²	32.78 ⁵⁹
34.2	58.626	63.75	62.350	66.73	7.094	32.19
Mean Place	56.599	65.46	59.812	52.64	4.442	15.66
Sec δ , Tan δ	1.152	-0.572	1.009	+0.131	1.033	+0.259
L α , L δ	0.00	+0.4	0.00	+0.4	0.00	+0.4
ω α , L δ	+0.04	+0.2	-0.01	+0.3	-0.02	+0.3
AUTHORITY	A. E.		A. E.			

284 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	β Phœnicis. Mag. 3.4			β Andromedæ. Mag. 2.4			ζ^1 Piscium. Mag. 5.6		
	R.A.		Dec. S.	R.A.		Dec. N.	R.A.		Dec. N.
	h m I 2	° ' 47 7		h m I 5	° ' 35 12		h m I 9	° ' 7 10	
Jan. 0.3	40.813 ²³¹	53.98 ³⁰		28.390 ¹⁶⁸	70.06 ⁴⁴		45.369 ¹²⁴	21.75 ⁷¹	
10.2	40.582 ²³⁰	54.28 ²¹		28.222 ¹⁷⁷	69.62 ⁷⁷		45.245 ¹²⁹	21.04 ⁷²	
20.2	40.352 ²²¹	51.07 ⁷⁰		28.045 ¹⁷⁷	68.85 ¹⁰⁶		45.116 ¹³⁰	20.32 ⁷³	
30.2	40.131 ²⁰⁷	53.37 ¹¹⁷		27.868 ¹⁷⁰	67.79 ¹³¹		44.986 ¹²⁶	19.59 ⁶⁷	
Feb. 9.2	39.924 ¹⁸³	52.20 ¹⁶¹		27.698 ¹⁵³	66.48 ¹⁵⁰		44.860 ¹¹⁶	18.92 ⁶²	
19.1	39.741 ¹⁵⁴	50.59 ²⁰¹		27.545 ¹²⁹	64.98 ¹⁶⁵		44.744 ⁹⁷	18.30 ⁵²	
29.1	39.587 ¹¹⁷	48.58 ²³⁷		27.416 ⁹⁵	63.33 ¹⁷⁰		44.647 ⁷²	17.78 ³⁸	
Mar. 10.1	39.470 ⁷³	46.21 ²⁶⁷		27.321 ⁵⁵	61.63 ¹⁶⁸		44.575 ⁴⁰	17.40 ²¹	
20.0	39.397 ²⁵	43.54 ²⁹²		27.266 ⁷	59.95 ¹⁵⁹		44.535 ⁵	17.19 ¹	
30.0	39.372 ²⁸	40.62 ³¹⁰		27.259 ⁴⁴	58.36 ¹⁴¹		44.530 ³⁷	17.18 ²²	
Apr. 9.0	39.400 ⁸³	37.52 ³²²		27.303 ⁹⁷	56.95 ¹¹⁷		44.567 ⁷⁹	17.40 ⁴⁶	
19.0	39.483 ¹⁴⁰	34.30 ³²⁹		27.400 ¹⁵⁰	55.78 ⁸⁸		44.646 ¹²⁴	17.86 ⁷²	
28.9	39.623 ¹⁹⁵	31.01 ³²⁶		27.550 ²⁰⁰	54.90 ⁵⁵		44.770 ¹⁶⁶	18.58 ⁹⁹	
May 8.9	39.818 ²⁴⁶	27.75 ³¹⁷		27.750 ²⁴⁶	54.35 ¹⁷		44.936 ²⁰⁵	19.57 ¹²¹	
18.9	40.064 ²⁹³	24.58 ³⁰¹		27.996 ²⁸⁵	54.18 ²⁰		45.141 ²⁴⁰	20.78 ¹⁴⁴	
28.9	40.357 ³³⁴	21.57 ²⁷⁷		28.281 ³¹⁷	54.38 ⁵⁹		45.381 ²⁶⁹	22.22 ¹⁶³	
June 7.8	40.691 ³⁶⁵	18.80 ²⁴⁸		28.598 ³³⁸	54.97 ⁹⁴		45.650 ²⁸⁹	23.85 ¹⁷⁷	
17.8	41.056 ³⁸⁷	16.32 ²¹²		28.936 ³⁵²	55.91 ¹²⁸		45.939 ³⁰³	25.62 ¹⁸⁷	
27.8	41.443 ³⁹⁸	14.20 ¹⁶⁹		29.288 ³⁵⁵	57.19 ¹⁵⁹		46.242 ³⁰⁸	27.49 ¹⁹³	
July 7.7	41.841 ⁴⁰⁰	12.51 ¹²³		29.643 ³⁵¹	58.78 ¹⁸⁵		46.550 ³⁰⁵	29.42 ¹⁹²	
17.7	42.241 ³⁹⁰	11.28 ⁷²		29.994 ³³⁶	60.63 ²⁰⁶		46.855 ²⁹⁴	31.34 ¹⁸⁶	
27.7	42.631 ³⁷⁰	10.56 ²²		30.330 ³¹⁵	62.69 ²²²		47.149 ²⁷⁸	33.20 ¹⁷⁷	
Aug. 6.7	43.001 ³⁴⁰	10.34 ³⁰		30.645 ²⁸⁸	64.91 ²³³		47.427 ²⁵⁴	34.97 ¹⁶³	
16.6	43.341 ³⁰²	10.64 ⁸¹		30.933 ²⁵⁵	67.24 ²⁴⁰		47.681 ²²⁶	36.60 ¹⁴⁵	
26.6	43.643 ²⁵⁷	11.45 ¹²⁸		31.188 ²¹⁸	69.64 ²³⁹		47.907 ¹⁹⁶	38.05 ¹²⁴	
Sept. 5.6	43.900 ²⁰⁵	12.73 ¹⁷⁰		31.406 ¹⁸¹	72.03 ²³⁶		48.103 ¹⁶²	39.29 ¹⁰²	
15.6	44.105 ¹⁵²	14.43 ²⁰⁷		31.587 ¹⁴¹	74.39 ²²⁸		48.265 ¹²⁸	40.31 ⁷⁹	
25.5	44.257 ⁹⁷	16.50 ²³³		31.728 ¹⁰²	76.67 ²¹⁶		48.393 ⁹⁴	41.10 ⁵⁶	
Oct. 5.5	44.354 ⁴²	18.83 ²⁵²		31.830 ⁶³	78.83 ¹⁹⁹		48.487 ⁶²	41.66 ³⁵	
15.5	44.396 ¹¹	21.35 ²⁶⁰		31.893 ²⁸	80.82 ¹⁸¹		48.549 ³²	42.01 ¹⁴	
25.4	44.385 ⁵⁹	23.95 ²⁵⁷		31.921 ⁷	82.63 ¹⁵⁹		48.581 ²	42.15 ⁵	
Nov. 4.4	44.326 ¹⁰³	26.52 ²⁴⁴		31.914 ⁴⁰	84.22 ¹³⁴		48.583 ²³	42.10 ²⁰	
14.4	44.223 ¹⁴¹	28.96 ²²¹		31.874 ⁷¹	85.56 ¹⁰⁶		48.560 ⁴⁶	41.90 ³⁴	
24.4	44.082 ¹⁷²	31.17 ¹⁸⁹		31.803 ⁹⁷	86.62 ⁷⁷		48.514 ⁶⁸	41.56 ⁴⁵	
Dec. 4.3	43.910 ¹⁹⁷	33.06 ¹⁵¹		31.706 ¹²²	87.39 ⁴⁴		48.446 ⁸⁶	41.11 ⁵⁵	
14.3	43.713 ²¹⁴	34.57 ¹⁰⁷		31.584 ¹⁴³	87.83 ¹²		48.360 ¹⁰³	40.56 ⁶¹	
24.3	43.499 ²²³	35.64 ⁵⁸		31.441 ¹⁶⁰	87.95 ²²		48.257 ¹¹⁵	39.95 ⁶⁷	
34.3	43.276	36.22		31.281	87.73		48.142	39.28	
Mean Place	41.558	33.10		28.229	64.70		45.524	25.90	
Sec δ , Tan δ	1.470	-1.077		1.224	+0.706		1.008	+0.126	
L α , L δ	-0.01	+0.4		+0.01	+0.4		0.00	+0.4	
ω α , ω δ	+0.07	+0.3		-0.05	+0.3		-0.01	+0.3	
AUTHORITY	A. E.			A. E.					

APPARENT PLACES OF STARS, 1924. 285

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	θ Ceti. Mag. 3·8		δ Cassiopeiæ. Mag. 2·8		γ Phœnicis. Mag. 3·4	
	R. A.	Dec. S.	R. A.	Dec. N.	R. A.	Dec. S.
	h m I 20	° ' 8 34	h m I 20	° ' 59 50	h m I 25	° ' 43 42
Jan.	0·3 10·3 20·2 30·2	13·19 ^s ₆ 125 13·07 ^s ₁ 132 12·939 135 12·804 131	40·34 77 41·11 60 41·71 43 42·14 23	50·74 ^s ₈ 328 50·420 346 50·074 349 49·725 337	38·62 20 38·82 32 38·50 84 37·66 132	3·434 ^s ₂₁₃ 47·07 59 3·221 219 47·66 11 3·002 217 47·77 38 2·785 208 47·39 84
Feb.	9·2 19·1 29·1	12·673 121 12 552 104 12·448 81	42·37 2 42·39 20 42·19 43	49·388 311 49·077 268 48·809 213	36·34 173 34·61 209 32·52 236	2·577 192 46·55 130 2·385 167 45 25 171 2·218 137 43·54 209
Mar.	10·1 20·1 30·0	12·367 52 12·315 17 12 298 23	41·76 67 41·09 92 40·17 116	48·596 144 48·452 67 48·385 16	30·16 251 27·65 256 25·09 252	2·081 98 41·45 242 1·983 53 39·03 271 1·930 3 36·32 293
Apr.	9·0 19·0 29·0	12·321 65 12·386 108 12·491 152	39·01 139 37·62 160 36·02 180	48·401 102 48·503 187 48·695 266	22·57 236 20·21 212 18·09 180	1·927 49 33·39 309 1·976 104 30·30 320 2·080 159 27·10 323
May	8·9 18·9 28·9	12 646 191 12·837 227 13·064 258	34·22 195 32·27 207 30·20 213	48·956 338 49·294 401 49·695 451	16·29 141 14·88 98 13·90 51	2·239 211 23·87 319 2·450 258 20·68 308 2·708 300 17·60 290
June	7·8 17·8 27·8	13·322 281 13·603 297 13·900 305	28·07 215 25·92 211 23·81 201	50·146 489 50·635 512 51·147 522	13·39 3 13·36 46 13·82 92	3·008 333 14·70 264 3·341 359 12·06 232 3·700 375 9·74 194
July	7·8 17·7 27·7	14·205 305 14·510 298 14·808 282	21·80 186 19·94 165 18·29 141	51·669 518 52·187 504 52·691 476	14·74 136 16·10 176 17·86 214	4·075 380 7·80 150 4·455 375 6·30 102 4·830 360 5·28 52
Aug.	6·7 16·7 26·6	15·090 261 15·351 236 15·587 204	16·88 114 15·74 83 14·91 51	53·167 440 53·607 396 54·003 344	20·00 245 22·45 270 25·15 292	5·190 337 4·76 1 5·527 304 4·75 51 5·831 266 5·26 101
Sept.	5·6 15·6 25·5	15·791 172 15·963 138 16·101 103	14·40 20 14·20 11 14·31 38	54·347 290 54·637 231 54·868 170	28·07 305 31·12 314 34·26 317	6·097 221 6·27 145 6·318 173 7·72 185 6·491 123 9·57 217
Oct.	5·5 15·5 25·5	16·204 69 16·273 37 16·310 7	14·69 62 15·31 82 16·13 97	55·038 109 55·147 48 55·195 13	37·43 313 40·56 301 43·57 284	6·614 72 11·74 240 6·686 23 14·14 253 6·709 23 16·67 257
Nov.	4·4 14·4 24·4	16·317 20 16·297 45 16·252 67	17·10 106 18·16 110 19·25 110	55·182 73 55·109 130 54·979 185	46·41 261 49·02 230 51·32 194	6·686 67 19·24 249 6·619 105 21·73 232 6·514 137 24·05 205
Dec.	4·4 14·3 24·3 34·3	16·185 87 16·098 103 15 995 117 15·878	20·36 105 21·41 96 22·37 83 23·20	54·791 234 54·560 278 54·282 312 53·970	53·26 152 54·78 105 55·83 54 56·37	6·377 166 26·10 172 6·211 188 27·82 131 6·023 203 29·13 86 5·820 29·99
Mean Place	13·429	30·34	49·779	27·74	3·916	26·49
Sec δ , Tan δ	1·011	-0·151	1·990	+1·721	1·383	-0·956
L α , L δ	0·00	+0·4	+0·02	+0·4	-0·01	+0·4
ω α , ω δ	+0·01	+0·3	-0·11	+0·3	+0·06	+0·4
AUTHORITY	A. E.		A. E.		A. N.	

286 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	η Piscium. Mag. 3.7		α Eridani. Mag. 0.6		ν Piscium. Mag. 4.7	
	R. A.	Dec. N.	R. A.	Dec. S.	R. A.	Dec. N.
	^h ^m I 27	[°] ['] 14 57	^h ^m I 34	[°] ['] 57 36	^h ^m I 37	[°] ['] 5 6
Jan.	0.3 24.803 ¹²⁷	14.23 ⁵⁹	52.597 ³²⁷	104.99 ⁵⁰	28.427 ¹²⁰	6.70 ⁶⁹
	10.3 24.676 ¹³⁷	13.64 ⁷⁰	52.270 ³³³	105.49 ⁶	28.307 ¹³⁰	6.01 ⁶⁸
	20.2 24.539 ¹⁴¹	12.94 ⁷⁷	51.937 ³³⁰	105.43 ⁶²	28.177 ¹³⁷	5.33 ⁶⁴
	30.2 24.398 ¹⁴⁰	12.17 ⁸¹	51.607 ³¹⁷	104.81 ¹¹⁷	28.040 ¹³⁸	4.69 ⁵⁸
Feb.	9.2 24.258 ¹³¹	11.36 ⁸³	51.290 ²⁹³	103.64 ¹⁶⁷	27.902 ¹³⁰	4.11 ⁵⁰
	19.2 24.127 ¹¹⁵	10.53 ⁸⁰	50.997 ²⁶¹	101.97 ²¹³	27.772 ¹¹⁷	3.61 ³⁹
	29.1 24.012 ⁹¹	9.73 ⁷³	50.736 ²¹⁸	99.84 ²⁵³	27.655 ⁹⁵	3.22 ²⁵
Mar.	10.1 23.921 ⁶⁰	9.00 ⁶²	50.518 ¹⁶⁸	97.31 ²⁸⁸	27.560 ⁶⁶	2.97 ⁸
	20.1 23.861 ²²	8.38 ⁴⁵	50.350 ¹⁰⁹	94.43 ³¹⁶	27.494 ³²	2.89 ¹¹
	30.0 23.839 ²⁰	7.93 ²⁶	50.241 ⁴⁵	91.27 ³³⁸	27.462 ⁸	3.00 ³³
Apr.	9.0 23.859 ⁶⁴	7.67 ²	50.196 ²³	87.89 ³⁵¹	27.470 ⁵²	3.33 ⁵⁷
	19.0 23.923 ¹¹⁰	7.65 ²⁴	50.219 ⁹⁴	84.38 ³⁵⁸	27.522 ⁹⁶	3.90 ⁸⁰
	29.0 24.033 ¹⁵⁵	7.89 ⁵⁰	50.313 ¹⁶⁵	80.80 ³⁵⁶	27.618 ¹⁴⁰	4.70 ¹⁰⁴
May	8.9 24.188 ¹⁹⁷	8.39 ⁷⁷	50.478 ²³²	77.24 ³⁴⁶	27.758 ¹⁸¹	5.74 ¹²⁷
	18.9 24.385 ²³⁴	9.16 ¹⁰⁴	50.710 ²⁹⁶	73.78 ³³⁰	27.939 ²¹⁹	7.01 ¹⁴⁷
	28.9 24.619 ²⁶⁵	10.20 ¹²⁷	51.006 ³⁵³	70.48 ³⁰⁴	28.158 ²⁵¹	8.48 ¹⁶⁴
June	7.9 24.884 ²⁸⁹	11.47 ¹⁴⁸	51.359 ⁴⁰⁰	67.44 ²⁷²	28.409 ²⁷⁶	10.12 ¹⁷⁷
	17.8 25.173 ³⁰⁵	12.95 ¹⁶⁶	51.759 ⁴³⁸	64.72 ²³³	28.685 ²⁹³	11.89 ¹⁸⁶
	27.8 25.478 ³¹²	14.61 ¹⁷⁷	52.197 ⁴⁶³	62.39 ¹⁸⁸	28.978 ³⁰³	13.75 ¹⁸⁹
July	7.8 25.790 ³¹³	16.38 ¹⁸⁶	52.660 ⁴⁷⁶	60.51 ¹³⁷	29.281 ³⁰⁵	15.64 ¹⁸⁸
	17.7 26.103 ³⁰⁴	18.24 ¹⁸⁸	53.136 ⁴⁷⁶	59.14 ⁸³	29.586 ²⁹⁹	17.52 ¹⁸¹
	27.7 26.407 ²⁸⁹	20.12 ¹⁸⁷	53.612 ⁴⁶³	58.31 ²⁶	29.885 ²⁸⁶	19.33 ¹⁶⁹
Aug.	6.7 26.696 ²⁶⁸	21.99 ¹⁸⁰	54.075 ⁴³⁸	58.05 ³¹	30.171 ²⁶⁷	21.02 ¹⁵⁴
	16.7 26.964 ²⁴³	23.79 ¹⁶⁹	54.513 ⁴⁰⁰	58.36 ⁸⁷	30.438 ²⁴⁴	22.56 ¹³⁵
	26.6 27.207 ²¹³	25.48 ¹⁵⁵	54.913 ³⁵¹	59.23 ¹⁴⁰	30.682 ²¹⁵	23.91 ¹¹³
Sept.	5.6 27.420 ¹⁸¹	27.03 ¹³⁹	55.264 ²⁹⁵	60.63 ¹⁸⁸	30.897 ¹⁸⁵	25.04 ⁸⁹
	15.6 27.601 ¹⁴⁸	28.42 ¹²⁰	55.559 ²³¹	62.51 ²³⁰	31.082 ¹⁵⁴	25.93 ⁶⁵
	25.6 27.749 ¹¹⁵	29.62 ¹⁰⁰	55.790 ¹⁶³	64.81 ²⁶¹	31.236 ¹²¹	26.58 ⁴²
Oct.	5.5 27.864 ⁸²	30.62 ⁸¹	55.953 ⁹³	67.42 ²⁸⁵	31.357 ⁹⁰	27.00 ¹⁹
	15.5 27.946 ⁵¹	31.43 ⁶⁰	56.046 ²³	70.27 ²⁹⁶	31.447 ⁵⁹	27.19 ¹
	25.5 27.997 ²²	32.03 ⁴²	56.069 ⁴⁵	73.23 ²⁹⁶	31.506 ²⁹	27.18 ¹⁹
Nov.	4.4 28.019 ⁷	32.45 ²⁴	56.024 ¹⁰⁸	76.19 ²⁸³	31.535 ²	26.99 ³⁴
	14.4 28.012 ³³	32.69 ⁶	55.916 ¹⁶⁶	79.02 ²⁶¹	31.537 ²⁴	26.65 ⁴⁵
	24.4 27.979 ⁵⁷	32.75 ¹⁰	55.750 ²¹⁵	81.63 ²²⁷	31.513 ⁴⁹	26.20 ⁵⁵
Dec.	4.4 27.922 ⁷⁹	32.65 ²⁴	55.535 ²⁵⁹	83.90 ¹⁸⁵	31.464 ⁷⁰	25.65 ⁶¹
	14.3 27.843 ¹⁰⁰	32.41 ³⁸	55.276 ²⁹⁰	85.75 ¹³⁶	31.394 ⁹¹	25.04 ⁶⁵
	24.3 27.743 ¹¹⁶	32.03 ⁵⁰	54.986 ³¹³	87.11 ⁸³	31.303 ¹⁰⁹	24.39 ⁶⁷
	34.3 27.627	31.53	54.673	87.94	31.194	23.72
Mean Place	24.782	16.32	53.101	81.46	28.445	12.52
Sec δ , Tan δ	1.035	+0.267	1.867	-1.577	1.004	+0.089
L α , L δ	0.00	+0.4	-0.02	+0.4	0.00	+0.4
ω α , ω δ	-0.02	+0.4	+0.10	+0.4	-0.01	+0.4
AUTHORITY	A. E.		A. E.		A. N.	

APPARENT PLACES OF STARS, 1924. 287

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	♋ Piscium. Mag. 4.5		ζ Ceti. Mag. 3.9		ε Cassiopeiæ. Mag. 3.4	
	R. A.	Dec. N.	R. A.	Dec. S.	R. A.	Dec. N.
	^h ^m I 4I	8 46	^h ^m I 47	IO 42	^h ^m I 48	63 17
Jan.	0.3 22.711 ^s ₁₁₉	27.93 ₆₄	42.424 ^s ₁₂₃	46.92 ₈₅	55.94 ₃₆	58.01 ₆₃
	10.3 22.592 ₁₃₂	27.29 ₆₇	42.301 ₁₃₆	47.77 ₆₆	55.58 ₃₉	58.64 ₉
	20.3 22.460 ₁₃₉	26.62 ₆₇	42.165 ₁₄₃	48.43 ₄₆	55.19 ₄₁	58.73 ₄₄
	30.2 22.321 ₁₄₀	25.95 ₆₅	42.022 ₁₄₄	48.89 ₂₃	54.78 ₄₀	58.29 ₉₆
Feb.	9.2 22.181 ₁₃₄	25.30 ₆₀	41.878 ₁₃₈	49.12 ₁	54.38 ₃₈	57.33 ₁₄₃
	19.2 22.047 ₁₂₀	24.70 ₅₃	41.740 ₁₂₆	49.11 ₂₅	54.00 ₃₅	55.90 ₁₈₅
	29.1 21.927 ₉₉	24.17 ₄₂	41.614 ₁₀₅	48.86 ₅₀	53.65 ₂₉	54.05 ₂₁₈
Mar.	10.1 21.828 ₇₀	23.75 ₂₇	41.509 ₇₈	48.36 ₇₅	53.36 ₂₂	51.87 ₂₄₁
	20.1 21.758 ₃₅	23.48 ₉	41.431 ₄₅	47.61 ₁₀₀	53.14 ₁₃	49.46 ₂₅₆
	30.1 21.723 ₅	23.39 ₁₁	41.386 ₆	46.61 ₁₂₆	53.01 ₅	46.90 ₂₅₉
Apr.	9.0 21.728 ₄₉	23.50 ₃₄	41.380 ₃₇	45.35 ₁₄₈	52.96 ₅	44.31 ₂₅₁
	19.0 21.777 ₉₄	23.84 ₅₉	41.417 ₈₁	43.87 ₁₇₁	53.01 ₁₅	41.80 ₂₃₄
	29.0 21.871 ₁₃₈	24.43 ₈₃	41.498 ₁₂₅	42.16 ₁₈₉	53.16 ₂₃	39.46 ₂₀₈
May	9.0 22.009 ₁₈₁	25.26 ₁₀₆	41.623 ₁₆₇	40.27 ₂₀₅	53.39 ₃₃	37.38 ₁₇₃
	18.9 22.190 ₂₁₈	26.32 ₁₂₉	41.790 ₂₀₆	38.22 ₂₁₆	53.72 ₄₀	35.63 ₁₃₆
	28.9 22.408 ₂₅₁	27.61 ₁₄₈	41.996 ₂₄₀	36.06 ₂₂₂	54.12 ₄₆	34.27 ₉₂
June	7.9 22.659 ₂₇₇	29.09 ₁₆₄	42.236 ₂₆₈	33.84 ₂₂₃	54.58 ₅₁	33.35 ₄₇
	17.8 22.936 ₂₉₄	30.73 ₁₇₆	42.504 ₂₈₈	31.61 ₂₁₈	55.09 ₅₅	32.88 ₂
	27.8 23.230 ₃₀₅	32.49 ₁₈₃	42.792 ₃₀₀	29.43 ₂₀₇	55.64 ₅₇	32.90 ₄₈
July	7.8 23.535 ₃₀₇	34.32 ₁₈₅	43.092 ₃₀₅	27.36 ₁₉₁	56.21 ₅₈	33.38 ₉₄
	17.8 23.842 ₃₀₂	36.17 ₁₈₂	43.397 ₃₀₂	25.45 ₁₆₉	56.79 ₅₇	34.32 ₁₃₈
	27.7 24.144 ₂₈₉	37.99 ₁₇₄	43.699 ₂₉₂	23.76 ₁₄₄	57.36 ₅₅	35.70 ₁₇₈
Aug.	6.7 24.433 ₂₇₁	39.73 ₁₆₂	43.991 ₂₇₄	22.32 ₁₁₃	57.91 ₅₂	37.48 ₂₁₃
	16.7 24.704 ₂₄₇	41.35 ₁₄₇	44.265 ₂₅₃	21.19 ₈₂	58.43 ₄₈	39.61 ₂₄₅
	26.6 24.951 ₂₂₁	42.82 ₁₂₇	44.518 ₂₂₅	20.37 ₄₇	58.91 ₄₃	42.06 ₂₇₁
Sept.	5.6 25.172 ₁₉₀	44.09 ₁₀₇	44.743 ₁₉₆	19.90 ₁₃	59.34 ₃₇	44.77 ₂₉₁
	15.6 25.362 ₁₅₈	45.16 ₈₅	44.939 ₁₆₂	19.77 ₁₈	59.71 ₃₁	47.68 ₃₀₆
	25.6 25.520 ₁₂₇	46.01 ₆₃	45.101 ₁₃₀	19.95 ₅₀	60.02 ₂₅	50.74 ₃₁₄
Oct.	5.5 25.647 ₉₅	46.64 ₄₁	45.231 ₉₇	20.45 ₇₆	60.27 ₁₈	53.88 ₃₁₇
	15.5 25.742 ₆₄	47.05 ₂₁	45.328 ₆₅	21.21 ₉₇	60.45 ₁₂	57.05 ₃₁₂
	25.5 25.806 ₃₄	47.26 ₃	45.393 ₃₃	22.18 ₁₁₃	60.57 ₄	60.17 ₃₀₂
Nov.	4.5 25.840 ₇	47.29 ₁₂	45.426 ₄	23.31 ₁₂₃	60.61 ₂	63.19 ₂₈₅
	14.4 25.847 ₂₁	47.17 ₂₇	45.430 ₂₄	24.54 ₁₂₇	60.59 ₁₀	66.04 ₂₅₉
	24.4 25.826 ₄₅	46.90 ₃₈	45.406 ₄₉	25.81 ₁₂₆	60.49 ₁₆	68.63 ₂₂₈
Dec.	4.4 25.781 ₆₈	46.52 ₄₇	45.357 ₇₃	27.07 ₁₂₀	60.33 ₂₃	70.91 ₁₉₁
	14.3 25.713 ₉₀	46.05 ₅₄	45.284 ₉₄	28.27 ₁₀₈	60.10 ₂₉	72.82 ₁₄₆
	24.3 25.623 ₁₀₈	45.51 ₆₀	45.190 ₁₁₂	29.35 ₉₄	59.81 ₃₃	74.28 ₉₇
	34.3 25.515	44.91	45.078	30.29	59.48	75.25
Mean Place	22.676	32.63	42.505	35.46	54.52	47.94
Sec δ, Tan δ	1.012	+0.154	1.018	-0.189	2.225	+1.988
L α, L δ	0.00	+0.4	0.00	+0.4	+0.02	+0.4
ω α, ω δ	-0.01	+0.4	+0.01	+0.5	-0.12	+0.5
AUTHORITY	A. E.		A. E.		A. E.	

288 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	β Arietis. Mag. 2.7			α Hydri. Mag. 3.0			γ Ceti. Mag. 4.2		
	R. A.		Dec. N.	R. A.		Dec. S.	R. A.		Dec. S.
	^h I ^m 50	[°] 20 ['] 26		^h I ^m 56	[°] 61 ['] 55		^h I ^m 56	[°] 21 ['] 26	
Jan.	0.3	26.427 ¹²⁷	12.52 ⁴³	21.80 ³⁸	105.86 ⁷²		25.310 ¹³⁷	58.56 ⁹⁶	
	10.3	26.300 ¹⁴²	12.09 ⁵⁷	21.42 ⁴⁰	106.58 ¹³		25.173 ¹⁵⁰	59.52 ⁶⁵	
	20.3	26.158 ¹⁵²	11.52 ⁷⁰	21.02 ⁴¹	106.71 ⁴⁵		25.023 ¹⁵⁸	60.17 ³⁴	
	30.2	26.006 ¹⁵⁵	10.82 ⁸¹	20.61 ³⁹	106.26 ¹⁰²		24.865 ¹⁶⁰	60.51 ¹	
Feb.	9.2	25.851 ¹⁵⁰	10.01 ⁸⁹	20.22 ³⁸	105.24 ¹⁵⁵		24.705 ¹⁵⁴	60.52 ³²	
	19.2	25.701 ¹³⁶	9.12 ⁹²	19.84 ³⁴	103.69 ²⁰³		24.551 ¹⁴²	60.20 ⁶⁵	
	29.1	25.565 ¹¹³	8.20 ⁹¹	19.50 ³⁰	101.66 ²⁴⁸		24.409 ¹²³	59.55 ⁹⁷	
Mar.	10.1	25.452 ⁸⁴	7.29 ⁸⁴	19.20 ²⁴	99.18 ²⁸⁵		24.286 ⁹⁴	58.58 ¹²⁷	
	20.1	25.368 ⁴⁷	6.45 ⁷⁴	18.96 ¹⁷	96.33 ³¹⁶		24.192 ⁶⁰	57.31 ¹⁵⁶	
	30.1	25.321 ⁴	5.71 ⁵⁷	18.79 ¹¹	93.17 ³⁴⁰		24.132 ²¹	55.75 ¹⁸²	
Apr.	9.0	25.317 ⁴³	5.14 ³⁸	18.68 ³	89.77 ³⁵⁶		24.111 ²²	53.93 ²⁰⁶	
	19.0	25.360 ⁹¹	4.76 ¹⁴	18.65 ⁵	86.21 ³⁶⁵		24.133 ⁶⁹	51.87 ²²⁷	
	29.0	25.451 ¹³⁷	4.62 ¹²	18.70 ¹²	82.56 ³⁶⁶		24.202 ¹¹⁵	49.60 ²⁴²	
May	9.0	25.588 ¹⁸³	4.74 ⁴⁰	18.82 ²¹	78.90 ³⁵⁹		24.317 ¹⁵⁹	47.18 ²⁵³	
	18.9	25.771 ²²⁴	5.14 ⁶⁷	19.03 ²⁹	75.31 ³⁴³		24.476 ²⁰⁰	44.65 ²⁵⁸	
	28.9	25.995 ²⁵⁸	5.81 ⁹⁴	19.32 ³⁵	71.88 ³²⁰		24.676 ²³⁸	42.07 ²⁵⁸	
June	7.9	26.253 ²⁸⁵	6.75 ¹¹⁷	19.67 ⁴¹	68.68 ²⁸⁸		24.914 ²⁶⁷	39.49 ²⁵¹	
	17.8	26.538 ³⁰⁶	7.92 ¹³⁹	20.08 ⁴⁶	65.80 ²⁴⁹		25.181 ²⁹¹	36.98 ²³⁷	
	27.8	26.844 ³¹⁶	9.31 ¹⁵⁷	20.54 ⁴⁹	63.31 ²⁰⁵		25.472 ³⁰⁷	34.61 ²¹⁸	
July	7.8	27.160 ³²¹	10.88 ¹⁷⁰	21.03 ⁵²	61.26 ¹⁵⁴		25.779 ³¹⁴	32.43 ¹⁹⁴	
	17.8	27.481 ³¹⁵	12.58 ¹⁷⁸	21.55 ⁵³	59.72 ¹⁰⁰		26.093 ³¹²	30.49 ¹⁶²	
	27.7	27.796 ³⁰⁵	14.36 ¹⁸³	22.08 ⁵³	58.72 ⁴¹		26.405 ³⁰⁵	28.87 ¹²⁷	
Aug.	6.7	28.101 ²⁸⁶	16.19 ¹⁸¹	22.61 ⁵⁰	58.31 ¹⁸		26.710 ²⁸⁹	27.60 ⁸⁸	
	16.7	28.387 ²⁶³	18.00 ¹⁷⁷	23.11 ⁴⁶	58.49 ⁷⁶		26.999 ²⁶⁸	26.72 ⁴⁸	
	26.6	28.650 ²³⁶	19.77 ¹⁶⁹	23.57 ⁴²	59.25 ¹³²		27.267 ²⁴⁰	26.24 ⁶	
Sept.	5.6	28.886 ²⁰⁶	21.46 ¹⁵⁷	23.99 ³⁶	60.57 ¹⁸⁴		27.507 ²¹⁰	26.18 ³⁴	
	15.6	29.092 ¹⁷⁵	23.03 ¹⁴²	24.35 ³¹	62.41 ²²⁹		27.717 ¹⁷⁷	26.52 ⁷³	
	25.6	29.257 ¹⁴²	24.45 ¹²⁶	24.66 ²¹	64.70 ²⁶⁵		27.894 ¹⁴¹	27.25 ¹⁰⁶	
Oct.	5.5	29.409 ¹¹⁰	25.71 ¹⁰⁹	24.87 ¹⁴	67.35 ²⁹²		28.035 ¹⁰⁵	28.31 ¹³⁵	
	15.5	29.519 ⁷⁸	26.80 ⁹²	25.01 ⁶	70.27 ³⁰⁶		28.140 ⁷¹	29.66 ¹⁵⁷	
	25.5	29.597 ⁴⁷	27.72 ⁷³	25.07 ²	73.33 ³¹⁰		28.211 ³⁶	31.23 ¹⁷²	
Nov.	4.5	29.644 ¹⁷	28.45 ⁵⁶	25.05 ¹⁰	76.43 ³⁰¹		28.247 ⁴	32.95 ¹⁷⁹	
	14.4	29.661 ¹³	29.01 ³⁸	24.95 ¹⁷	79.44 ²⁸⁰		28.251 ²⁷	34.74 ¹⁷⁸	
	24.4	29.648 ⁴⁰	29.39 ²⁰	24.78 ²³	82.24 ²⁴⁹		28.224 ⁵⁵	36.52 ¹⁷¹	
Dec.	4.4	29.608 ⁶⁷	29.59 ³	24.55 ²⁹	84.73 ²⁰⁷		28.169 ⁸¹	38.23 ¹⁵⁵	
	14.3	29.541 ⁹¹	29.62 ¹⁴	24.26 ³³	86.80 ¹⁵⁹		28.088 ¹⁰⁵	39.78 ¹³⁶	
	24.3	29.450 ¹¹⁴	29.48 ³⁰	23.93 ³⁷	88.39 ¹⁰⁴		27.983 ¹²⁴	41.14 ¹⁰⁹	
	34.3	29.336	29.18	23.56	89.43		27.859	42.23	
Mean Place	26.222	13.66		22.02	81.55		25.398	43.54	
Sec δ , Tan δ	1.067	+0.373		2.126	-1.876		1.074	-0.393	
L α , L δ	0.00	+0.4		-0.02	+0.3		-0.01	+0.3	
ω α , ω δ	-0.02	+0.5		+0.11	+0.5		+0.02	+0.5	
AUTHORITY	A. E.			A. E.			A. E.		

APPARENT PLACES OF STARS, 1924. 289

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	γ Andromedæ. Mag. 2.3		α Arietis. Mag. 2.2		β Trianguli. Mag. 3.1	
	R. A.	Dec. N.	R. A.	Dec. N.	R. A.	Dec. N.
	^h I 59	[°] 41 57	^h 2 2	[°] 23 6	^h 2 4	[°] 34 37
Jan.	0.3 14.190 ¹⁷⁷	61.76 ¹⁶	53.372 ¹²⁶	12.89 ³²	61.398 ¹⁴⁹	45.25 ¹
	10.3 14.013 ¹⁹⁹	61.92 ²²	53.246 ¹⁴⁵	12.57 ⁴⁸	61.249 ¹⁷⁰	45.24 ²⁹
	20.3 13.814 ²¹³	61.70 ⁵⁶	53.101 ¹⁵⁷	12.09 ⁶⁴	61.079 ¹⁸⁴	44.95 ⁵⁷
	30.2 13.601 ²¹⁷	61.14 ⁹⁰	52.944 ¹⁶²	11.45 ⁷⁸	60.895 ¹⁹¹	44.38 ⁸³
Feb.	9.2 13.384 ²¹⁰	60.24 ¹¹⁹	52.782 ¹⁵⁹	10.67 ⁸⁸	60.704 ¹⁸⁶	43.55 ¹⁰⁵
	19.2 13.174 ¹⁹³	59.05 ¹⁴⁴	52.623 ¹⁴⁷	9.79 ⁹⁴	60.518 ¹⁷²	42.50 ¹²⁴
	29.2 12.981 ¹⁶⁴	57.61 ¹⁶²	52.476 ¹²⁷	8.85 ⁹⁷	60.346 ¹⁴⁹	41.26 ¹³⁵
Mar.	10.1 12.817 ¹²⁶	55.99 ¹⁷³	52.349 ⁹⁷	7.88 ⁹⁴	60.197 ¹¹⁵	39.91 ¹⁴²
	20.1 12.691 ⁷⁸	54.26 ¹⁷⁶	52.252 ⁵⁹	6.94 ⁸⁵	60.082 ⁷²	38.49 ¹⁴¹
	30.1 12.613 ²⁴	52.50 ¹⁷⁰	52.193 ¹⁷	6.09 ⁷²	60.010 ²⁵	37.08 ¹³⁴
Apr.	9.0 12.589 ³⁵	50.80 ¹⁵⁸	52.176 ³⁰	5.37 ⁵⁴	59.985 ²⁹	35.74 ¹¹⁸
	19.0 12.624 ⁹⁵	49.22 ¹³⁸	52.206 ⁸⁰	4.83 ³²	60.014 ⁸³	34.56 ⁹⁹
	29.0 12.719 ¹⁵⁵	47.84 ¹¹²	52.286 ¹²⁸	4.51 ⁷	60.097 ¹³⁷	33.57 ⁷⁴
May	9.0 12.874 ²¹⁰	46.72 ⁸¹	52.414 ¹⁷⁵	4.44 ²⁰	60.234 ¹⁸⁹	32.83 ⁴⁵
	18.9 13.084 ²⁶⁰	45.91 ⁴⁸	52.589 ²¹⁷	4.64 ⁴⁸	60.423 ²³⁶	32.38 ¹³
	28.9 13.344 ³⁰³	45.43 ¹¹	52.806 ²⁵⁴	5.12 ⁷⁵	60.659 ²⁷⁶	32.25 ¹⁹
June	7.9 13.647 ³³⁷	45.32 ²⁵	53.060 ²⁸⁴	5.87 ¹⁰¹	60.935 ³¹⁰	32.44 ⁵¹
	17.9 13.984 ³⁶³	45.57 ⁶²	53.344 ³⁰⁵	6.88 ¹²³	61.245 ³³²	32.95 ⁸³
	27.8 14.347 ³⁷⁷	46.19 ⁹⁶	53.649 ³¹⁹	8.11 ¹⁴³	61.577 ³⁴⁷	33.78 ¹¹¹
July	7.8 14.724 ³⁸³	47.15 ¹²⁷	53.968 ³²⁵	9.54 ¹⁵⁹	61.924 ³⁵⁵	34.89 ¹³⁶
	17.8 15.107 ³⁸⁰	48.42 ¹⁵⁶	54.293 ³²²	11.13 ¹⁷⁰	62.279 ³⁵¹	36.25 ¹⁵⁹
	27.7 15.487 ³⁶⁷	49.98 ¹⁸⁰	54.615 ³¹²	12.83 ¹⁷⁷	62.630 ³⁴¹	37.84 ¹⁷⁷
Aug.	6.7 15.854 ³⁴⁸	51.78 ²⁰⁰	54.927 ²⁹⁶	14.60 ¹⁷⁹	62.971 ³²⁵	39.61 ¹⁹⁰
	16.7 16.202 ³²³	53.78 ²¹⁵	55.223 ²⁷⁵	16.39 ¹⁷⁸	63.296 ³⁰¹	41.51 ¹⁹⁹
	26.7 16.525 ²⁹¹	55.93 ²²⁵	55.498 ²⁴⁹	18.17 ¹⁷¹	63.597 ²⁷⁴	43.50 ²⁰⁴
Sept.	5.6 16.816 ²⁵⁸	58.18 ²³²	55.747 ²²⁰	19.88 ¹⁶³	63.871 ²⁴³	45.54 ²⁰⁴
	15.6 17.074 ²²⁰	60.50 ²³³	55.967 ¹⁹⁰	21.51 ¹⁵¹	64.114 ²¹⁰	47.58 ²⁰¹
	25.6 17.294 ¹⁸²	62.83 ²³¹	56.157 ¹⁵⁸	23.02 ¹³⁷	64.324 ¹⁷⁵	49.59 ¹⁹⁴
Oct.	5.6 17.476 ¹⁴³	65.14 ²²⁴	56.315 ¹²⁵	24.39 ¹²²	64.499 ¹⁴⁰	51.53 ¹⁸⁵
	15.5 17.619 ¹⁰²	67.38 ²¹³	56.440 ⁹⁴	25.61 ¹⁰⁵	64.639 ¹⁰⁴	53.38 ¹⁷³
	25.5 17.721 ⁶³	69.51 ²⁰⁰	56.534 ⁶²	26.66 ⁸⁹	64.743 ⁶⁸	55.11 ¹⁵⁷
Nov.	4.5 17.784 ²³	71.51 ¹⁸¹	56.596 ³⁰	27.55 ⁷¹	64.811 ³³	56.68 ¹⁴¹
	14.4 17.807 ¹⁷	73.32 ¹⁶⁰	56.626 ⁰	28.26 ⁵⁴	64.844 ³	58.09 ¹²⁰
	24.4 17.790 ⁵⁵	74.92 ¹³⁴	56.626 ³⁰	28.80 ³⁶	64.841 ³⁷	59.29 ⁹⁸
Dec.	4.4 17.735 ⁹³	76.26 ¹⁰⁶	56.596 ⁶⁰	29.16 ¹⁸	64.804 ⁷¹	60.27 ⁷⁴
	14.4 17.642 ¹²⁸	77.32 ⁷⁴	56.536 ⁸⁶	29.34 ¹	64.733 ¹⁰³	61.01 ⁴⁸
	24.3 17.514 ¹⁵⁹	78.06 ³⁹	56.450 ¹¹¹	29.35 ¹⁸	64.630 ¹³²	61.49 ¹⁹
	34.3 17.355	78.45	56.339	29.17	64.498	61.68
Mean Place	13.577	56.92	53.069	13.67	60.908	42.69
Sec δ , Tan δ	1.345	+0.899	1.087	+0.427	1.215	+0.691
L α , L δ	+0.01	+0.3	+0.01	+0.3	+0.01	+0.3
ω α , ω δ	-0.05	+0.5	-0.02	+0.5	-0.04	+0.5
AUTHORITY	A. E.		A. E.		A. E.	

290 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	ξ^1 Ceti. Mag. 4.5		67 Ceti. Mag. 5.7		ϕ Eridani. Mag. 3.8	
	R. A.	Dec. N.	R. A.	Dec. S.	R. A.	Dec. S.
	^h 2 ^m 8	^h 8 ^m 29	^h 2 ^m 13	^h 6 ^m 46	^h 2 ^m 13	^h 5 ^m 1
Jan. 0.3	58.334 ¹¹³	21.03 ⁶²	11.564 ¹¹⁵	29.22 ⁸⁹	47.611 ²⁶⁴	71.79 ¹⁰⁵
10.3	58.221 ¹³⁰	20.41 ⁶²	11.449 ¹³²	30.11 ⁷⁴	47.347 ²⁸²	72.84 ⁵³
20.3	58.091 ¹⁴³	19.79 ⁶³	11.317 ¹⁴³	30.85 ⁵⁶	47.065 ²⁹²	73.37 ²
30.2	57.948 ¹⁴⁸	19.16 ⁵⁸	11.174 ¹⁵⁰	31.41 ³⁷	46.773 ²⁹³	73.35 ⁵⁶
Feb. 9.2	57.800 ¹⁴⁷	18.58 ⁵⁵	11.024 ¹⁴⁸	31.78 ¹⁷	46.480 ²⁸³	72.79 ¹⁰⁸
19.2	57.653 ¹³⁸	18.03 ⁴⁷	10.876 ¹³⁹	31.95 ⁵	46.197 ²⁶⁴	71.71 ¹⁵⁶
29.2	57.515 ¹¹⁹	17.56 ³⁷	10.737 ¹²³	31.90 ²⁷	45.933 ²³⁶	70.15 ²⁰²
Mar. 10.1	57.396 ⁹⁴	17.19 ²³	10.614 ⁹⁸	31.63 ⁵¹	45.697 ¹⁹⁷	68.13 ²⁴¹
20.1	57.302 ⁶²	16.96 ⁷	10.516 ⁶⁷	31.12 ⁷⁴	45.500 ¹⁵⁰	65.72 ²⁷⁶
30.1	57.240 ²²	16.89 ¹²	10.449 ²⁹	30.38 ⁹⁹	45.350 ⁹⁷	62.96 ³⁰⁵
Apr. 9.0	57.218 ²²	17.01 ³²	10.420 ¹²	29.39 ¹²³	45.253 ³⁸	59.91 ³²⁶
19.0	57.240 ⁶⁷	17.33 ⁵⁶	10.432 ⁵⁷	28.16 ¹⁴⁵	45.215 ²⁶	56.65 ³⁴¹
29.0	57.307 ¹¹²	17.89 ⁷⁹	10.489 ¹⁰¹	26.71 ¹⁶⁵	45.241 ⁹¹	53.24 ³⁵⁰
May 9.0	57.419 ¹⁵⁷	18.68 ¹⁰¹	10.590 ¹⁴⁶	25.06 ¹⁸²	45.332 ¹⁵³	49.74 ³⁴⁹
18.9	57.576 ¹⁹⁷	19.69 ¹²³	10.736 ¹⁸⁶	23.24 ¹⁹⁷	45.485 ²¹⁵	46.25 ³⁴¹
28.9	57.773 ²³²	20.92 ¹⁴¹	10.922 ²²²	21.27 ²⁰⁷	45.700 ²⁷¹	42.84 ³²⁵
June 7.9	58.005 ²⁶²	22.33 ¹⁵⁷	11.144 ²⁵²	19.20 ²¹¹	45.971 ³¹⁹	39.59 ³⁰¹
17.9	58.267 ²⁸³	23.90 ¹⁶⁸	11.396 ²⁷⁵	17.09 ²¹¹	46.290 ³⁶⁰	36.58 ²⁷⁰
27.8	58.550 ²⁹⁹	25.58 ¹⁷⁶	11.671 ²⁹²	14.98 ²⁰⁴	46.650 ³⁹⁰	33.88 ²³²
July 7.8	58.849 ³⁰⁴	27.34 ¹⁷⁷	11.963 ²⁹⁹	12.94 ¹⁹³	47.040 ⁴¹¹	31.56 ¹⁸⁶
17.8	59.153 ³⁰³	29.11 ¹⁷⁶	12.262 ³⁰¹	11.01 ¹⁷⁵	47.451 ⁴²⁰	29.70 ¹³⁶
27.7	59.456 ²⁹⁶	30.87 ¹⁶⁷	12.563 ²⁹⁴	9.26 ¹⁵⁴	47.871 ⁴¹⁸	28.34 ⁸²
Aug. 6.7	59.752 ²⁸²	32.54 ¹⁵⁶	12.857 ²⁸¹	7.72 ¹²⁷	48.289 ⁴⁰⁴	27.52 ²⁵
16.7	60.034 ²⁶²	34.10 ¹⁴⁰	13.138 ²⁶³	6.45 ⁹⁸	48.693 ³⁸¹	27.27 ³²
26.7	60.296 ²³⁸	35.50 ¹²²	13.401 ²⁴⁰	5.47 ⁶⁶	49.074 ³⁴⁷	27.59 ⁸⁸
Sept. 5.6	60.534 ²¹¹	36.72 ¹⁰⁰	13.641 ²¹³	4.81 ³⁵	49.421 ³⁰⁶	28.47 ¹⁴¹
15.6	60.745 ¹⁸³	37.72 ⁷⁹	13.854 ¹⁸⁴	4.46 ²	49.727 ²⁵⁷	29.88 ¹⁸⁹
25.6	60.928 ¹⁵³	38.51 ⁵⁷	14.038 ¹⁵³	4.44 ²⁷	49.984 ²⁰⁴	31.77 ²³⁰
Oct. 5.6	61.081 ¹²²	39.08 ³⁵	14.191 ¹²³	4.71 ⁵⁵	50.188 ¹⁴⁷	34.07 ²⁶¹
15.5	61.203 ⁹³	39.43 ¹⁵	14.314 ⁹¹	5.26 ⁷⁷	50.335 ⁸⁸	36.68 ²⁸⁴
25.5	61.296 ⁶²	39.58 ²	14.405 ⁶¹	6.03 ⁹⁵	50.423 ³⁰	39.52 ²⁹³
Nov. 4.5	61.358 ³⁴	39.56 ¹⁸	14.466 ³⁰	6.98 ¹⁰⁸	50.453 ²⁷	42.45 ²⁹²
14.4	61.392 ⁵	39.38 ³⁰	14.496 ²	8.06 ¹¹⁵	50.426 ⁸¹	45.37 ²⁸⁰
24.4	61.397 ²³	39.08 ⁴⁰	14.498 ²⁶	9.21 ¹¹⁶	50.345 ¹³⁰	48.17 ²⁵⁶
Dec. 4.4	61.374 ⁴⁹	38.68 ⁴⁸	14.472 ⁵³	10.37 ¹¹⁴	50.215 ¹⁷⁵	50.73 ²²³
14.4	61.325 ⁷⁵	38.20 ⁵⁴	14.419 ⁷⁸	11.51 ¹⁰⁶	50.040 ²¹³	52.96 ¹⁸²
24.3	61.250 ⁹⁸	37.66 ⁵⁷	14.341 ¹⁰⁰	12.57 ⁹⁵	49.827 ²⁴⁵	54.78 ¹³⁶
34.3	61.152	37.09	14.241	13.52	49.582	56.14
Mean Place	58.153	26.72	11.470	18.47	47.614	49.14
Sec δ , Tan δ	1.011	+0.149	1.007	-0.119	1.619	-1.274
L α , L δ	0.00	+0.3	0.00	+0.3	-0.02	+0.3
ω α , ω δ	-0.01	+0.5	+0.01	+0.5	+0.07	+0.5
AUTHORITY			A. E.		A. N.	

APPARENT PLACES OF STARS, 1924. 291

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	θ Arietis. Mag. 5.7		\circ Ceti. Mag. 1.7-9.6		κ Fornacis. Mag. 5.4	
	R. A.	Dec. N.	R. A.	Dec. S.	R. A.	Dec. S.
	^h 2 ^m 13	[°] 19 ['] 32	^h 2 ^m 15	[°] 3 ['] 19	^h 2 ^m 19	[°] 24 ['] 9
Jan. 0.3	53.958 ¹¹⁹	58.71 ³⁵	30.484 ¹¹³	28.57 ⁸⁴	3.947 ¹³⁷	56.17 ¹¹¹
10.3	53.839 ¹³⁸	58.36 ⁴⁸	30.371 ¹³¹	29.41 ⁷⁴	3.810 ¹⁵⁵	57.28 ⁷⁹
20.3	53.701 ¹⁵²	57.88 ⁵⁹	30.240 ¹⁴¹	30.15 ⁵⁹	3.655 ¹⁶⁷	58.07 ⁴⁵
30.2	53.549 ¹⁵⁹	57.29 ⁶⁹	30.099 ¹⁴⁹	30.74 ⁴³	3.488 ¹⁷³	58.52 ⁸
Feb. 9.2	53.390 ¹⁵⁹	56.60 ⁷⁵	29.950 ¹⁴⁸	31.17 ²⁷	3.315 ¹⁷¹	58.60 ²⁷
19.2	53.231 ¹⁴⁹	55.85 ⁸⁰	29.802 ¹⁴¹	31.44 ⁸	3.144 ¹⁶²	58.33 ⁶³
29.2	53.082 ¹³¹	55.05 ⁷⁹	29.661 ¹²³	31.52 ¹²	2.982 ¹⁴⁴	57.70 ⁹⁸
Mar. 10.1	52.951 ¹⁰⁴	54.26 ⁷⁴	29.538 ⁹⁹	31.40 ³⁴	2.838 ¹¹⁹	56.72 ¹³⁰
20.1	52.847 ⁶⁹	53.52 ⁶⁵	29.439 ⁶⁷	31.06 ⁵⁷	2.719 ⁸⁷	55.42 ¹⁶¹
30.1	52.778 ²⁸	52.87 ⁵¹	29.372 ²⁹	30.49 ⁷⁸	2.632 ⁴⁸	53.81 ¹⁹⁰
Apr. 9.0	52.750 ¹⁸	52.36 ³³	29.343 ¹⁰	29.71 ¹⁰³	2.584 ⁴	51.91 ²¹⁴
19.0	52.768 ⁶⁷	52.03 ¹²	29.353 ⁵⁶	28.68 ¹²⁴	2.580 ⁴³	49.77 ²³⁶
29.0	52.835 ¹¹⁴	51.91 ¹²	29.409 ¹⁰¹	27.44 ¹⁴⁵	2.623 ⁹⁰	47.41 ²⁵³
May 9.0	52.949 ¹⁶¹	52.03 ³⁷	29.510 ¹⁴⁴	25.99 ¹⁶³	2.713 ¹³⁶	44.88 ²⁶⁴
18.9	53.110 ²⁰⁴	52.40 ⁶³	29.654 ¹⁸⁶	24.36 ¹⁸⁰	2.849 ¹⁸¹	42.24 ²⁷⁰
28.9	53.314 ²⁴¹	53.03 ⁸⁷	29.840 ²²⁰	22.56 ¹⁹²	3.030 ²²⁰	39.54 ²⁷⁰
June 7.9	53.555 ²⁷¹	53.90 ¹¹⁰	30.060 ²⁵²	20.64 ²⁰⁰	3.250 ²⁵⁴	36.84 ²⁶⁴
17.9	53.826 ²⁹⁴	55.00 ¹³⁰	30.312 ²⁷⁴	18.64 ²⁰¹	3.504 ²⁸²	34.20 ²⁴⁹
27.8	54.120 ³¹⁰	56.30 ¹⁴⁷	30.586 ²⁹¹	16.63 ¹⁹⁷	3.786 ³⁰¹	31.71 ²²⁹
July 7.8	54.430 ³¹⁷	57.77 ¹⁵⁹	30.877 ²⁹⁹	14.66 ¹⁸⁹	4.087 ³¹²	29.42 ²⁰³
17.8	54.747 ³¹⁶	59.36 ¹⁶⁶	31.176 ³⁰⁰	12.77 ¹⁷⁵	4.399 ³¹⁶	27.39 ¹⁷¹
27.7	55.063 ³⁰⁸	61.02 ¹⁷¹	31.476 ²⁹⁴	11.02 ¹⁵⁸	4.715 ³¹²	25.68 ¹³⁴
Aug. 6.7	55.371 ²⁹⁴	62.73 ¹⁷⁰	31.770 ²⁸⁰	9.44 ¹³³	5.027 ²⁹⁹	24.34 ⁹³
16.7	55.665 ²⁷⁵	64.43 ¹⁶⁴	32.050 ²⁶³	8.11 ¹⁰⁸	5.326 ²⁸²	23.41 ⁵⁰
26.7	55.940 ²⁵¹	66.07 ¹⁵⁶	32.313 ²⁴⁰	7.03 ⁷⁹	5.608 ²⁵⁸	22.91 ⁶
Sept. 5.6	56.191 ²²⁵	67.63 ¹⁴⁵	32.553 ²¹⁴	6.24 ⁴⁷	5.866 ²³⁰	22.85 ³⁸
15.6	56.416 ¹⁹⁵	69.08 ¹³⁰	32.767 ¹⁸³	5.77 ¹⁹	6.096 ¹⁹⁸	23.23 ⁷⁹
25.6	56.611 ¹⁶⁵	70.38 ¹¹⁵	32.950 ¹⁵⁶	5.58 ⁹	6.294 ¹⁶⁵	24.02 ¹¹⁶
Oct. 5.6	56.776 ¹³⁴	71.53 ⁹⁹	33.106 ¹²⁶	5.67 ³⁶	6.459 ¹²⁹	25.18 ¹⁴⁸
15.5	56.910 ¹⁰³	72.52 ⁸²	33.232 ⁹⁶	6.03 ⁵⁸	6.588 ⁹⁴	26.66 ¹⁷³
25.5	57.013 ⁷³	73.34 ⁶⁶	33.328 ⁶⁵	6.61 ⁷⁵	6.682 ⁵⁹	28.39 ¹⁸⁹
Nov. 4.5	57.086 ⁴¹	74.00 ⁵⁰	33.393 ³⁵	7.36 ⁸⁹	6.741 ²⁴	30.28 ¹⁹⁹
14.4	57.127 ¹¹	74.50 ³⁴	33.428 ⁴	8.25 ⁹⁶	6.765 ⁹	32.27 ¹⁹⁸
24.4	57.138 ¹⁹	74.84 ¹⁹	33.432 ²²	9.21 ¹⁰²	6.756 ⁴⁰	34.25 ¹⁹¹
Dec. 4.4	57.119 ⁴⁸	75.03 ⁴	33.410 ⁵⁰	10.23 ¹⁰⁰	6.716 ⁷¹	36.16 ¹⁷⁶
14.4	57.071 ⁷⁶	75.07 ¹⁰	33.360 ⁷⁴	11.23 ⁹⁵	6.645 ⁹⁷	37.92 ¹⁵⁵
24.3	56.995 ¹⁰²	74.97 ²⁵	33.286 ⁹⁸	12.18 ⁸⁹	6.548 ¹²²	39.47 ¹²⁷
34.3	56.893	74.72	33.188	13.07	6.426	40.74
Mean Place	53.642	61.04	30.357	18.87	3.892	40.07
Sec δ , Tan δ	1.061	+0.355	1.002	-0.058	1.096	-0.449
L α , L δ	+0.01	+0.3	0.00	+0.3	-0.01	+0.3
ω α , ω δ	-0.02	+0.5	0.00	+0.6	+0.02	+0.6
AUTHORITY	A. N.		A. E.		A. N.	

292 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	δ Hydri. Mag. 4.3		ξ Ceti. Mag. 4.3		ν Ceti. Mag. 5.0	
	R. A.	Dec. S.	R. A.	Dec. N.	R. A.	Dec. N.
	^h ^m 2 20	68 59	^h ^m 2 24	8 7	^h ^m 2 31	5 15
Jan. 0.3	23.73 ^s 54	102.50 ^s 93	7.181 ^s 108	6.41 ^s 61	53.258 ^s 105	37.51 ^s 67
10.3	23.19 56	103.43 34	7.073 127	5.80 61	53.153 126	36.84 65
20.3	22.63 57	103.77 26	6.946 142	5.19 60	53.027 141	36.19 60
30.2	22.06 57	103.51 86	6.804 151	4.59 56	52.886 152	35.59 52
Feb. 9.2	21.49 55	102.65 141	6.653 153	4.03 51	52.734 154	35.07 44
19.2	20.94 51	101.24 193	6.500 145	3.52 43	52.580 149	34.63 35
29.2	20.43 46	99.31 239	6.355 129	3.09 34	52.431 134	34.28 21
Mar. 10.1	19.97 40	96.92 280	6.226 106	2.75 20	52.297 111	34.07 7
20.1	19.57 32	94.12 313	6.120 74	2.55 4	52.186 81	34.00 10
30.1	19.25 23	90.99 340	6.046 36	2.51 14	52.105 44	34.10 30
Apr. 9.0	19.02 13	87.59 359	6.010 7	2.65 34	52.061 1	34.40 49
19.0	18.89 3	84.00 370	6.017 52	2.99 56	52.060 42	34.89 72
29.0	18.86 7	80.30 373	6.069 98	3.55 78	52.102 89	35.61 94
May 9.0	18.93 18	76.57 368	6.167 142	4.33 100	52.191 134	36.55 114
18.9	19.11 27	72.89 354	6.309 185	5.33 120	52.325 176	37.69 133
28.9	19.38 37	69.35 333	6.494 221	6.53 139	52.501 214	39.02 151
June 7.9	19.75 46	66.02 303	6.715 252	7.92 154	52.715 245	40.53 164
17.9	20.21 53	62.99 265	6.967 276	9.46 165	52.960 270	42.17 172
27.8	20.74 58	60.34 221	7.243 293	11.11 171	53.230 288	43.89 177
July 7.8	21.32 63	58.13 170	7.536 302	12.82 174	53.518 298	45.66 177
17.8	21.95 65	56.43 115	7.838 303	14.56 171	53.816 301	47.43 172
27.7	22.60 66	55.28 57	8.141 298	16.27 164	54.117 296	49.15 160
Aug. 6.7	23.26 64	54.71 4	8.439 286	17.91 152	54.413 287	50.75 147
16.7	23.90 62	54.75 66	8.725 269	19.43 136	54.700 270	52.22 128
26.7	24.52 56	55.41 123	8.994 248	20.79 117	54.970 250	53.50 107
Sept. 5.6	25.08 50	56.64 179	9.242 223	21.96 96	55.220 227	54.57 83
15.6	25.58 42	58.43 227	9.465 195	22.92 75	55.447 200	55.40 59
25.6	26.00 33	60.70 267	9.660 167	23.67 52	55.647 172	55.99 36
Oct. 5.6	26.33 22	63.37 298	9.827 137	24.19 30	55.819 143	56.35 12
15.5	26.55 11	66.35 317	9.964 108	24.49 11	55.962 115	56.47 7
25.5	26.66 1	69.52 323	10.072 78	24.60 7	56.077 84	56.40 26
Nov. 4.5	26.67 10	72.75 318	10.150 49	24.53 22	56.161 55	56.14 41
14.4	26.57 20	75.93 299	10.199 19	24.31 34	56.216 25	55.73 51
24.4	26.37 30	78.92 270	10.218 10	23.97 43	56.241 4	55.22 60
Dec. 4.4	26.07 37	81.62 229	10.208 39	23.54 50	56.237 32	54.62 64
14.4	25.70 45	83.91 182	10.169 66	23.04 55	56.205 62	53.98 66
24.3	25.25 51	85.73 127	10.103 91	22.49 58	56.143 87	53.32 66
34.3	24.74	87.00	10.012	21.91	56.056	52.66
Mean Place	23.44	77.52	6.927	12.69	52.986	44.91
Sec δ, Tan δ	2.791	-2.606	1.010	+0.143	1.004	+0.092
L α, L δ	-0.04	+0.3	0.00	+0.3	0.00	+0.3
ω α, ω δ	+0.14	+0.6	-0.01	+0.6	-0.01	+0.6
AUTHORITY	A. E.					

APPARENT PLACES OF STARS, 1924. 293

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	δ Ceti. Mag. 4.0		γ Ceti. Mag. 3.6		π Ceti. Mag. 4.4	
	R. A.	Dec. S.-N.	R. A.	Dec. N.	R. A.	Dec. S.
	^h 2 35	[°] 0 0	^h 2 39	[°] 2 54	^h 2 40	[°] 14 10
Jan. 0.3	35.376 ¹⁰⁴	S. 3.57 ⁸¹	21.905 ¹⁰¹	50.33 ⁷⁴	30.463 ¹¹³	60.69 ¹¹¹
10.3	35.272 ¹²⁵	4.38 ⁷¹	21.804 ¹²⁴	49.59 ⁶⁸	30.350 ¹³⁶	61.80 ⁸⁸
20.3	35.147 ¹⁴¹	5.09 ⁶¹	21.680 ¹⁴¹	48.91 ⁶⁰	30.214 ¹⁵¹	62.68 ⁶³
30.3	35.006 ¹⁵²	5.70 ⁴⁸	21.539 ¹⁵³	48.31 ⁵¹	30.063 ¹⁶²	63.31 ³⁵
Feb. 9.2	34.854 ¹⁵⁴	6.18 ³⁵	21.386 ¹⁵⁶	47.80 ⁴⁰	29.901 ¹⁶⁵	63.66 ⁷
19.2	34.700 ¹⁵⁰	6.53 ¹⁹	21.230 ¹⁵¹	47.40 ²⁸	29.736 ¹⁶⁰	63.73 ²¹
29.2	34.550 ¹³⁶	6.72 ¹	21.079 ¹³⁹	47.12 ¹³	29.576 ¹⁴⁷	63.52 ⁵⁰
Mar. 10.1	34.414 ¹¹⁴	6.73 ¹⁷	20.940 ¹¹⁷	46.99 ⁴	29.429 ¹²⁵	63.02 ⁷⁹
20.1	34.300 ⁸⁵	6.56 ³⁷	20.823 ⁸⁷	47.03 ²¹	29.304 ⁹⁶	62.23 ¹⁰⁶
30.1	34.215 ⁴⁷	6.19 ⁵⁸	20.736 ⁵²	47.24 ⁴²	29.208 ⁶⁰	61.17 ¹³³
Apr. 9.1	34.168 ⁷	5.61 ⁸⁰	20.684 ¹⁰	47.66 ⁶²	29.148 ²⁰	59.84 ¹⁵⁸
19.0	34.161 ³⁷	4.81 ¹⁰³	20.674 ³⁵	48.28 ⁸⁴	29.128 ²⁶	58.26 ¹⁸²
29.0	34.198 ⁸³	3.78 ¹²³	20.709 ⁸⁰	49.12 ¹⁰⁶	29.154 ⁷¹	56.44 ²⁰²
May 9.0	34.281 ¹²⁸	2.55 ¹⁴⁴	20.789 ¹²⁶	50.18 ¹²⁶	29.225 ¹¹⁷	54.42 ²¹⁶
19.0	34.409 ¹⁶⁹	S. 1.11 ¹⁶⁰	20.915 ¹⁶⁷	51.44 ¹⁴⁴	29.342 ¹⁶⁰	52.26 ²²⁹
28.9	34.578 ²⁰⁷	N. 0.49 ¹⁷⁴	21.082 ²⁰⁷	52.88 ¹⁵⁹	29.502 ¹⁹⁹	49.97 ²³⁵
June 7.9	34.785 ²⁴⁰	2.23 ¹⁸⁴	21.289 ²³⁸	54.47 ¹⁷¹	29.701 ²³⁴	47.62 ²³⁷
17.9	35.025 ²⁶⁵	4.07 ¹⁹⁰	21.527 ²⁶⁵	56.18 ¹⁷⁹	29.935 ²⁶¹	45.25 ²³²
27.8	35.290 ²⁸³	5.97 ¹⁸⁹	21.792 ²⁸³	57.97 ¹⁸¹	30.196 ²⁸¹	42.93 ²²¹
July 7.8	35.573 ²⁹⁵	7.86 ¹⁸⁵	22.075 ²⁹⁴	59.78 ¹⁷⁹	30.477 ²⁹⁶	40.72 ²⁰³
17.8	35.868 ²⁹⁹	9.71 ¹⁷⁴	22.369 ²⁹⁹	61.57 ¹⁷¹	30.773 ³⁰¹	38.69 ¹⁸¹
27.8	36.167 ²⁹⁵	11.45 ¹⁵⁹	22.668 ²⁹⁶	63.28 ¹⁵⁹	31.074 ³⁰⁰	36.88 ¹⁵³
Aug. 6.7	36.462 ²⁸⁶	13.04 ¹⁴⁰	22.964 ²⁸⁷	64.87 ¹⁴³	31.374 ²⁹¹	35.35 ¹²⁰
16.7	36.748 ²⁷¹	14.44 ¹¹⁶	23.251 ²⁷²	66.30 ¹²¹	31.665 ²⁷⁸	34.15 ⁸⁵
26.7	37.019 ²⁵¹	15.60 ⁹¹	23.523 ²⁵³	67.51 ⁹⁹	31.943 ²⁵⁸	33.30 ⁴⁷
Sept. 5.7	37.270 ²²⁸	16.51 ⁶³	23.776 ²³⁰	68.50 ⁷³	32.201 ²³⁴	32.83 ⁹
15.6	37.498 ²⁰²	17.14 ³⁴	24.006 ²⁰⁴	69.23 ⁴⁷	32.435 ²⁰⁷	32.74 ²⁹
25.6	37.700 ¹⁷³	17.48 ⁸	24.210 ¹⁷⁸	69.70 ²²	32.642 ¹⁷⁹	33.03 ⁶⁴
Oct. 5.6	37.873 ¹⁴⁵	17.56 ¹⁸	24.388 ¹⁴⁹	69.92 ²	32.821 ¹⁴⁸	33.67 ⁹⁵
15.5	38.018 ¹¹⁶	17.38 ³⁹	24.537 ¹²⁰	69.90 ²⁴	32.969 ¹¹⁷	34.62 ¹²¹
25.5	38.134 ⁸⁶	16.99 ⁵⁸	24.657 ⁹¹	69.66 ⁴²	33.086 ⁸⁴	35.83 ¹⁴¹
Nov. 4.5	38.220 ⁵⁶	16.41 ⁷²	24.748 ⁶¹	69.24 ⁵⁶	33.170 ⁵³	37.24 ¹⁵⁴
14.5	38.276 ²⁶	15.69 ⁸³	24.809 ³¹	68.68 ⁶⁷	33.223 ²²	38.78 ¹⁶⁰
24.4	38.302 ³	14.86 ⁸⁸	24.840 ²	68.01 ⁷³	33.245 ¹¹	40.38 ¹⁵⁹
Dec. 4.4	38.299 ³²	13.98 ⁹⁰	24.842 ²⁸	67.28 ⁷⁷	33.234 ⁴⁰	41.97 ¹⁵²
14.4	38.267 ⁶¹	13.08 ⁸⁷	24.814 ⁵⁷	66.51 ⁷⁷	33.194 ⁶⁹	43.49 ¹⁴⁰
24.4	38.206 ⁸⁶	12.21 ⁸³	24.757 ⁸⁴	65.74 ⁷⁴	33.125 ⁹⁷	44.89 ¹²¹
34.3	38.120	N. 11.38	24.673	65.00	33.028	46.10
Mean Place	35.122	N. 5.55	21.613	58.65	30.246	47.24
Sec δ, Tan δ	1.000	0.000	1.001	+0.051	1.031	-0.253
L α, L δ	0.00	+0.3	0.00	+0.3	0.00	+0.3
ω α, ω δ	0.00	+0.6	0.00	+0.6	+0.01	+0.6
AUTHORITY	A. E.		A. N.		A. E.	

294 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	β Fornacis. Mag. 4.5		σ Arietis. Mag. 5.5		ϵ Arietis (mean). Mag. 4.6	
	R. A.	Dec. S.	R. A.	Dec. N.	R. A.	Dec. N.
	^h ^m 2 45	[°] ['] 32 43	^h ^m 2 47	[°] ['] 14 46	^h ^m 2 54	[°] ['] 21 2
Jan. 0.3	54.842 ⁸ ₁₅₂	46.67 ¹³⁹	18.013 ⁹⁹	5.73 ⁴⁰	52.243 ¹⁰¹	10.64 ¹⁷
10.3	54.690 ₁₇₆	48.06 ⁹⁹	17.914 ¹²⁵	5.33 ⁴⁶	52.142 ¹²⁸	10.47 ²⁸
20.3	54.514 ₁₉₂	49.05 ⁵⁷	17.789 ¹⁴⁶	4.87 ⁵⁰	52.014 ¹⁵¹	10.19 ⁴⁰
30.3	54.322 ₂₀₂	49.62 ¹⁴	17.643 ¹⁵⁸	4.37 ⁵⁴	51.863 ¹⁶⁶	9.79 ⁵¹
Feb. 9.2	54.120 ₂₀₅	49.76 ²⁹	17.485 ¹⁶⁴	3.83 ⁵⁶	51.697 ¹⁷³	9.28 ⁵⁹
19.2	53.915 ₁₉₉	49.47 ⁷²	17.321 ¹⁶⁰	3.27 ⁵⁵	51.524 ¹⁷⁰	8.69 ⁶⁴
29.2	53.716 ₁₈₄	48.75 ¹¹³	17.161 ¹⁴⁸	2.72 ⁵²	51.354 ¹⁵⁹	8.05 ⁶⁹
Mar. 10.2	53.532 ₁₆₀	47.62 ¹⁵¹	17.013 ¹²⁶	2.20 ⁴⁶	51.195 ¹³⁶	7.36 ⁶⁸
20.1	53.372 ₁₂₈	46.11 ¹⁸⁶	16.887 ⁹⁵	1.74 ³⁶	51.059 ¹⁰⁵	6.68 ⁶³
30.1	53.244 ₉₀	44.25 ²¹⁹	16.792 ⁵⁸	1.38 ²²	50.954 ⁶⁷	6.05 ⁵⁴
Apr. 9.1	53.154 ₄₄	42.06 ²⁴⁶	16.734 ¹⁵	1.16 ⁶	50.887 ²³	5.51 ⁴¹
19.0	53.110 ₆	39.60 ²⁶⁹	16.719 ³²	1.10 ¹³	50.864 ²⁶	5.10 ²⁵
29.0	53.116 ₅₄	36.91 ²⁸⁶	16.751 ⁷⁹	1.23 ³³	50.890 ⁷⁴	4.85 ⁶
May 9.0	53.170 ₁₀₆	34.05 ²⁹⁸	16.830 ¹²⁶	1.56 ⁵⁶	50.964 ¹²⁴	4.79 ¹⁷
19.0	53.276 ₁₅₅	31.07 ³⁰²	16.956 ¹⁷⁰	2.12 ⁷⁷	51.088 ¹⁶⁹	4.96 ³⁹
28.9	53.431 ₁₉₉	28.05 ³⁰¹	17.126 ²¹⁰	2.89 ⁹⁸	51.257 ²¹²	5.35 ⁶¹
June 7.9	53.630 ₂₃₉	25.04 ²⁹¹	17.336 ²⁴⁴	3.87 ¹¹⁶	51.469 ²⁴⁷	5.96 ⁸³
17.9	53.869 ₂₇₃	22.13 ²⁷⁴	17.580 ²⁷¹	5.03 ¹³²	51.716 ²⁷⁵	6.79 ¹⁰³
27.9	54.142 ₃₀₀	19.39 ²⁵⁰	17.851 ²⁹⁰	6.35 ¹⁴⁴	51.991 ²⁹⁷	7.82 ¹¹⁹
July 7.8	54.442 ₃₁₇	16.89 ²²⁰	18.141 ³⁰⁴	7.79 ¹⁵²	52.288 ³¹¹	9.01 ¹³³
17.8	54.759 ₃₂₈	14.69 ¹⁸³	18.445 ³⁰⁸	9.31 ¹⁵⁷	52.599 ³¹⁶	10.34 ¹⁴²
27.8	55.087 ₃₂₉	12.86 ¹⁴⁰	18.753 ³⁰⁷	10.88 ¹⁵⁵	52.915 ³¹⁶	11.76 ¹⁴⁷
Aug. 6.7	55.416 ₃₂₃	11.46 ⁹⁴	19.060 ²⁹⁷	12.43 ¹⁵⁰	53.231 ³⁰⁸	13.23 ¹⁴⁹
16.7	55.739 ₃₀₉	10.52 ⁴⁵	19.357 ²⁸³	13.93 ¹⁴¹	53.539 ²⁹⁶	14.72 ¹⁴⁶
26.7	56.048 ₂₉₀	10.07 ⁶	19.640 ²⁶⁶	15.34 ¹²⁹	53.835 ²⁷⁸	16.18 ¹⁴¹
Sept. 5.7	56.338 ₂₆₃	10.13 ⁵⁶	19.906 ²⁴³	16.63 ¹¹⁴	54.113 ²⁵⁶	17.59 ¹³¹
15.6	56.601 ₂₃₂	10.69 ¹⁰³	20.149 ²¹⁹	17.77 ⁹⁸	54.369 ²³²	18.90 ¹²⁰
25.6	56.833 ₁₉₉	11.72 ¹⁴⁶	20.368 ¹⁹²	18.75 ⁸¹	54.601 ²⁰⁶	20.10 ¹⁰⁸
Oct. 5.6	57.032 ₁₆₂	13.18 ¹⁸²	20.560 ¹⁶⁴	19.56 ⁶²	54.807 ¹⁷⁸	21.18 ⁹⁴
15.6	57.194 ₁₂₃	15.00 ²¹¹	20.724 ¹³⁶	20.18 ⁴⁵	54.985 ¹⁴⁸	22.12 ⁸⁰
25.5	57.317 ₈₅	17.11 ²³²	20.860 ¹⁰⁵	20.63 ³⁰	55.133 ¹¹⁸	22.92 ⁶⁶
Nov. 4.5	57.402 ₄₅	19.43 ²⁴²	20.965 ⁷⁶	20.93 ¹⁶	55.251 ⁸⁷	23.58 ⁵³
14.5	57.447 ₆	21.85 ²⁴³	21.041 ⁴⁴	21.09 ³	55.338 ⁵⁴	24.11 ⁴¹
24.4	57.453 ₃₂	24.28 ²³⁴	21.085 ¹³	21.12 ⁸	55.392 ²¹	24.52 ²⁸
Dec. 4.4	57.421 ₆₈	26.62 ²¹⁷	21.098 ¹⁹	21.04 ¹⁸	55.413 ¹³	24.80 ¹⁷
14.4	57.353 ₁₀₂	28.79 ¹⁹¹	21.079 ⁵¹	20.86 ²⁵	55.400 ⁴⁷	24.97 ⁵
24.4	57.251 ₁₃₂	30.70 ¹⁵⁸	21.028 ⁸⁰	20.61 ³⁴	55.353 ⁸⁰	25.02 ⁷
34.3	57.119	32.28	20.948	20.27	55.273	24.95
Mean Place	54.601	28.28	17.590	10.71	51.720	14.10
Sec δ , Tan δ	1.189	-0.643	1.034	+0.264	1.071	+0.385
L α , L δ	-0.01	+0.3	0.00	+0.3	+0.01	+0.3
ω α , ω δ	+0.03	+0.7	-0.01	+0.7	-0.02	+0.7
AUTHORITY	A. E.					

APPARENT PLACES OF STARS, 1924. 295

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	θ Eridani. Mag. 3.1		α Ceti. Mag. 2.8		γ Persei. Mag. 3.1	
	R. A.	Dec. S.	R. A.	Dec. N.	R. A.	Dec. N.
	^h ^m 2 55	[°] ['] ["] 40 36	^h ^m 2 58	[°] ['] ["] 3 47	^h ^m 2 59	[°] ['] ["] 53 12
Jan. 0.3	23.248 ¹⁷⁸	50.98 ¹⁵³	18.646 ⁹³	24.28 ⁷³	18.155 ¹⁹¹	40.42 ¹⁰³
10.3	23.070 ²⁰⁶	52.51 ¹⁰⁸	18.553 ¹¹⁸	23.55 ⁶⁷	17.964 ²³⁵	41.45 ⁶⁴
20.3	22.864 ²²⁴	53.59 ⁶¹	18.435 ¹³⁹	22.88 ⁶⁰	17.729 ²⁶⁹	42.09 ²³
30.3	22.640 ²³⁷	54.20 ¹²	18.296 ¹⁵³	22.28 ⁵¹	17.460 ²⁹²	42.32 ²¹
Feb. 9.2	22.403 ²⁴⁰	54.32 ³⁷	18.143 ¹⁶¹	21.77 ⁴¹	17.168 ³⁰⁰	42.11 ⁶²
19.2	22.163 ²³⁴	53.95 ⁸³	17.982 ¹⁶⁰	21.36 ²⁹	16.868 ²⁹⁴	41.49 ¹⁰¹
29.2	21.929 ²¹⁹	53.12 ¹³⁰	17.822 ¹⁴⁸	21.07 ¹⁵	16.574 ²⁷²	40.48 ¹³⁵
Mar. 10.2	21.710 ¹⁹⁴	51.82 ¹⁷¹	17.674 ¹³⁰	20.92 ⁰	16.302 ²³⁶	39.13 ¹⁶³
20.1	21.516 ¹⁶⁰	50.11 ²⁰⁹	17.544 ¹⁰²	20.92 ¹⁷	16.066 ¹⁸⁶	37.50 ¹⁸⁴
30.1	21.356 ¹¹⁹	48.02 ²⁴³	17.442 ⁶⁷	21.09 ³⁶	15.880 ¹²⁶	35.66 ¹⁹⁶
Apr. 9.1	21.237 ⁷¹	45.59 ²⁷³	17.375 ²⁷	21.45 ⁵⁶	15.754 ⁵⁸	33.70 ²⁰¹
19.0	21.166 ¹⁹	42.86 ²⁹⁵	17.348 ¹⁷	22.01 ⁷⁷	15.696 ¹⁶	31.69 ¹⁹⁶
29.0	21.147 ³⁶	39.91 ³¹³	17.365 ⁶³	22.78 ⁹⁷	15.712 ⁹⁰	29.73 ¹⁸³
May 9.0	21.183 ⁹²	36.78 ³²³	17.428 ¹⁰⁸	23.75 ¹¹⁷	15.802 ¹⁶³	27.90 ¹⁶⁴
19.0	21.275 ¹⁴⁵	33.55 ³²⁶	17.536 ¹⁵²	24.92 ¹³⁵	15.965 ²³¹	26.26 ¹³⁹
28.9	21.420 ¹⁹⁵	30.29 ³²²	17.688 ¹⁹¹	26.27 ¹⁵¹	16.196 ²⁹³	24.87 ¹⁰⁹
June 7.9	21.615 ²⁴⁰	27.07 ³¹⁰	17.879 ²²⁶	27.78 ¹⁶³	16.489 ³⁴⁷	23.78 ⁷⁵
17.9	21.855 ²⁸⁰	23.97 ²⁸⁹	18.105 ²⁵⁴	29.41 ¹⁷¹	16.836 ³⁸⁹	23.03 ³⁹
27.9	22.135 ³¹⁰	21.08 ²⁶²	18.359 ²⁷⁶	31.12 ¹⁷⁴	17.225 ⁴²³	22.64 ³
July 7.8	22.445 ³³³	18.46 ²²⁷	18.635 ²⁸⁹	32.86 ¹⁷⁴	17.648 ⁴⁴⁵	22.61 ³⁵
17.8	22.778 ³⁴⁸	16.19 ¹⁸⁶	18.924 ²⁹⁷	34.60 ¹⁶⁷	18.093 ⁴⁵⁷	22.96 ⁶⁹
27.8	23.126 ³⁵⁴	14.33 ¹³⁹	19.221 ²⁹⁷	36.27 ¹⁵⁶	18.550 ⁴⁵⁹	23.65 ¹⁰³
Aug. 6.7	23.480 ³⁴⁹	12.94 ⁸⁸	19.518 ²⁹¹	37.83 ¹⁴⁰	19.009 ⁴⁵⁰	24.68 ¹³⁴
16.7	23.829 ³³⁷	12.06 ³⁴	19.809 ²⁷⁹	39.23 ¹²¹	19.459 ⁴³⁶	26.02 ¹⁶²
26.7	24.166 ³¹⁸	11.72 ²¹	20.088 ²⁶²	40.44 ⁹⁹	19.895 ⁴¹²	27.64 ¹⁸⁵
Sept. 5.7	24.484 ²⁹¹	11.93 ⁷⁴	20.350 ²⁴³	41.43 ⁷⁴	20.307 ³⁸²	29.49 ²⁰⁶
15.6	24.775 ²⁵⁹	12.67 ¹²⁶	20.593 ²¹⁹	42.17 ⁴⁹	20.689 ³⁴⁸	31.55 ²²²
25.6	25.034 ²²¹	13.93 ¹⁷²	20.812 ¹⁹⁴	42.66 ²³	21.037 ³¹⁰	33.77 ²³⁴
Oct. 5.6	25.255 ¹⁸¹	15.65 ²¹¹	21.006 ¹⁶⁸	42.89 ⁰	21.347 ²⁶⁷	36.11 ²⁴²
15.6	25.436 ¹³⁹	17.76 ²⁴²	21.174 ¹³⁹	42.89 ²¹	21.614 ²²²	38.53 ²⁴⁵
25.5	25.575 ⁹³	20.18 ²⁶³	21.313 ¹¹⁰	42.68 ⁴⁰	21.836 ¹⁷³	40.98 ²⁴⁵
Nov. 4.5	25.668 ⁴⁸	22.81 ²⁷⁴	21.423 ⁸¹	42.28 ⁵⁵	22.009 ¹²⁰	43.43 ²³⁸
14.5	25.716 ³	25.55 ²⁷⁴	21.504 ⁵⁰	41.73 ⁶⁵	22.129 ⁶⁶	45.81 ²²⁸
24.4	25.719 ⁴⁰	28.29 ²⁶³	21.554 ¹⁹	41.08 ⁷²	22.195 ¹⁰	48.09 ²¹¹
Dec. 4.4	25.679 ⁸²	30.92 ²⁴²	21.573 ¹²	40.36 ⁷⁶	22.205 ⁴⁸	50.20 ¹⁸⁹
14.4	25.597 ¹²²	33.34 ²¹³	21.561 ⁴⁴	39.60 ⁷⁵	22.157 ¹⁰⁵	52.09 ¹⁶²
24.4	25.475 ¹⁵⁷	35.47 ¹⁷⁶	21.517 ⁷⁴	38.85 ⁷³	22.052 ¹⁵⁹	53.71 ¹²⁸
34.3	25.318	37.23	21.443	38.12	21.893	54.99
Mean Place	22.901	30.92	18.259	32.78	16.855	36.35
Sec δ , Tan δ	1.317	-0.857	1.002	+0.066	1.670	+1.337
L α , L δ	-0.02	+0.3	0.00	+0.3	+0.02	+0.3
ω α , ω δ	+0.04	+0.7	0.00	+0.7	-0.06	+0.7
AUTHORITY	A. E.		A. E.		A. E.	

296 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	μ Horologii. Mag. 5.2		β Persei. Mag. 2.1-3.2		δ Arietis. Mag. 4.5	
	R. A.	Dec. S.	R. A.	Dec. N.	R. A.	Dec. N.
	^h 3	^m I	^h 3	^m 3	^h 3	^m 7
	^s 3	[°] I	^s 3	[°] 39	^s 3	[°] 26
Jan. 0.4	49.75	33 77.93 ¹⁶⁰	13.885 ¹³¹	51.52 ⁵⁹	17.333 ⁹²	20.94 ¹⁹
10.3	49.42	37 79.53 ¹⁰⁵	13.754 ¹⁶⁷	52.11 ³¹	17.241 ¹²¹	20.75 ²⁸
20.3	49.05	39 80.58 ⁴⁸	13.587 ¹⁹⁷	52.42 ⁰	17.120 ¹⁴⁵	20.47 ³⁸
30.3	48.66	41 81.06 ¹⁰	13.390 ²¹⁶	52.42 ³²	16.975 ¹⁶³	20.09 ⁴⁶
Feb. 9.2	48.25	41 80.96 ⁶⁶	13.174 ²²⁵	52.10 ⁶⁰	16.812 ¹⁷²	19.63 ⁵²
19.2	47.84	39 80.30 ¹²⁰	12.949 ²²⁴	51.50 ⁸⁷	16.640 ¹⁷³	19.11 ⁵⁷
29.2	47.45	37 79.10 ¹⁷²	12.725 ²⁰⁸	50.63 ¹¹¹	16.467 ¹⁶²	18.54 ⁵⁹
Mar. 10.2	47.08	34 77.38 ²¹⁸	12.517 ¹⁸¹	49.52 ¹²⁸	16.305 ¹⁴²	17.95 ⁵⁷
20.1	46.74	29 75.20 ²⁵⁸	12.336 ¹⁴³	48.24 ¹⁴⁰	16.163 ¹¹⁴	17.38 ⁵³
30.1	46.45	22 72.62 ²⁹³	12.193 ⁹⁶	46.84 ¹⁴⁵	16.049 ⁷⁷	16.85 ⁴⁴
Apr. 9.1	46.23	16 69.69 ³²³	12.097 ⁴²	45.39 ¹⁴³	15.972 ³³	16.41 ³²
19.1	46.07	9 66.46 ³⁴³	12.055 ¹⁶	43.96 ¹³⁵	15.939 ¹³	16.09 ¹⁶
29.0	45.98	1 63.03 ³⁵⁸	12.071 ⁷⁶	42.61 ¹¹⁹	15.952 ⁶²	15.93 ³
May 9.0	45.97	7 59.45 ³⁶⁴	12.147 ¹³⁵	41.42 ¹⁰⁰	16.014 ¹¹⁰	15.96 ²³
19.0	46.04	14 55.81 ³⁶¹	12.282 ¹⁹¹	40.42 ⁷⁵	16.124 ¹⁵⁷	16.19 ⁴³
28.9	46.18	23 52.20 ³⁵¹	12.473 ²⁴¹	39.67 ⁴⁸	16.281 ¹⁹⁸	16.62 ⁶⁵
June 7.9	46.41	29 48.69 ³³¹	12.714 ²⁸⁵	39.19 ¹⁹	16.479 ²³⁶	17.27 ⁸⁵
17.9	46.70	35 45.38 ³⁰³	12.999 ³²¹	39.00 ¹⁰	16.715 ²⁶⁶	18.12 ¹⁰³
27.9	47.05	40 42.35 ²⁶⁸	13.320 ³⁴⁷	39.10 ⁴¹	16.981 ²⁸⁸	19.15 ¹¹⁸
July 7.8	47.45	44 39.67 ²²⁶	13.667 ³⁶⁶	39.51 ⁶⁹	17.269 ³⁰⁴	20.33 ¹³⁰
17.8	47.89	47 37.41 ¹⁷⁵	14.033 ³⁷⁵	40.20 ⁹⁴	17.573 ³¹³	21.63 ¹³⁷
27.8	48.36	49 35.66 ¹²¹	14.408 ³⁷⁷	41.14 ¹¹⁸	17.886 ³¹³	23.00 ¹⁴²
Aug. 6.8	48.85	49 34.45 ⁶³	14.785 ³⁷⁰	42.32 ¹³⁹	18.199 ³⁰⁹	24.42 ¹⁴²
16.7	49.34	48 33.82 ²	15.155 ³⁵⁶	43.71 ¹⁵⁵	18.508 ²⁹⁷	25.84 ¹³⁷
26.7	49.82	45 33.80 ⁶⁰	15.511 ³³⁷	45.26 ¹⁶⁸	18.805 ²⁸²	27.21 ¹³¹
Sept. 5.7	50.27	42 34.40 ¹¹⁹	15.848 ³¹⁵	46.94 ¹⁷⁸	19.087 ²⁶²	28.52 ¹²¹
15.6	50.69	37 35.59 ¹⁷⁴	16.163 ²⁸⁷	48.72 ¹⁸⁴	19.349 ²³⁹	29.73 ¹⁰⁸
25.6	51.06	31 37.33 ²²³	16.450 ²⁵⁶	50.56 ¹⁸⁷	19.588 ²¹⁵	30.81 ⁹⁵
Oct. 5.6	51.37	25 39.56 ²⁶⁴	16.706 ²²⁴	52.43 ¹⁸⁷	19.803 ¹⁸⁹	31.76 ⁸¹
15.6	51.62	18 42.20 ²⁹⁴	16.930 ¹⁸⁸	54.30 ¹⁸⁴	19.992 ¹⁶⁰	32.57 ⁶⁷
25.5	51.80	11 45.14 ³¹⁵	17.118 ¹⁵¹	56.14 ¹⁷⁹	20.152 ¹³⁰	33.24 ⁵⁴
Nov. 4.5	51.91	3 48.29 ³²²	17.269 ¹¹²	57.93 ¹⁶⁹	20.282 ⁹⁹	33.78 ⁴⁰
14.5	51.94	5 51.51 ³¹⁷	17.381 ⁶⁹	59.62 ¹⁵⁹	20.381 ⁶⁷	34.18 ²⁹
24.5	51.89	11 54.68 ³⁰⁰	17.450 ²⁷	61.21 ¹⁴⁴	20.448 ³⁴	34.47 ¹⁹
Dec. 4.4	51.78	18 57.68 ²⁷²	17.477 ¹⁸	62.65 ¹²⁵	20.482 ²	34.66 ⁸
14.4	51.60	25 60.40 ²³⁴	17.459 ⁶²	63.90 ¹⁰⁴	20.480 ³⁶	34.74 ²
24.4	51.35	30 62.74 ¹⁸⁹	17.397 ¹⁰⁵	64.94 ⁷⁸	20.444 ⁷⁰	34.72 ¹⁰
34.3	51.05	64.63	17.292	65.72	20.374	34.62
Mean Place	49.04	54.79	12.992	50.32	16.778	25.30
Sec δ , Tan δ	2.002	-1.734	1.318	+0.859	1.060	+0.353
L α , L δ	-0.03	+0.3	+0.02	+0.3	+0.01	+0.3
ω α , ω δ	+0.08	-0.7	-0.04	+0.7	-0.02	+0.7
AUTHORITY	A. E.		A. E.		A. E.	

APPARENT PLACES OF STARS, 1924. 297

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	γ^1 Arietis. Mag. 5.2			α Persei. Mag. 1.9			σ Tauri. Mag. 3.8		
	R. A.		Dec. N.	R. A.		Dec. N.	R. A.		Dec. N.
	^h 3	^m 16	[°] 20 ['] 52	^h 3	^m 18	[°] 49 ['] 35	^h 3	^m 20	[°] 8 ['] 45
Jan.	0.4	50.760 ₈₆	22.19 ₁₁	54.470 ₁₅₁	33.27 ₁₀₅	43.764 ₈₁	37.11 ₅₈		
	10.3	50.674 ₁₁₉	22.08 ₂₁	54.319 ₁₉₇	34.32 ₇₁	43.683 ₁₁₀	36.53 ₅₅		
	20.3	50.555 ₁₄₅	21.87 ₃₂	54.122 ₂₃₄	35.03 ₃₅	43.573 ₁₃₆	35.98 ₅₂		
	30.3	50.410 ₁₆₅	21.55 ₄₀	53.888 ₂₆₁	35.38 ₅	43.437 ₁₅₄	35.46 ₄₈		
Feb.	9.3	50.245 ₁₇₆	21.15 ₄₉	53.627 ₂₇₅	35.33 ₄₂	43.283 ₁₆₅	34.98 ₄₃		
	19.2	50.069 ₁₇₇	20.66 ₅₅	53.352 ₂₇₅	34.91 ₇₈	43.118 ₁₆₈	34.55 ₃₆		
	29.2	49.892 ₁₆₉	20.11 ₅₉	53.077 ₂₆₁	34.13 ₁₁₁	42.950 ₁₆₁	34.19 ₂₈		
Mar.	10.2	49.723 ₁₅₁	19.52 ₅₉	52.816 ₂₃₂	33.02 ₁₃₈	42.789 ₁₄₅	33.91 ₁₈		
	20.1	49.572 ₁₂₂	18.93 ₅₇	52.584 ₁₉₀	31.64 ₁₅₉	42.644 ₁₁₉	33.73 ₄		
	30.1	49.450 ₈₇	18.36 ₄₉	52.394 ₁₃₇	30.05 ₁₇₃	42.525 ₈₆	33.69 ₁₀		
Apr.	9.1	49.363 ₄₃	17.87 ₃₉	52.257 ₇₆	28.32 ₁₇₉	42.439 ₄₆	33.79 ₂₆		
	19.1	49.320 ₄	17.48 ₂₅	52.181 ₁₀	26.53 ₁₇₇	42.393 ₂	34.05 ₄₅		
	29.0	49.324 ₅₃	17.23 ₈	52.171 ₆₀	24.76 ₁₆₈	42.391 ₄₄	34.50 ₆₄		
May	9.0	49.377 ₁₀₁	17.15 ₁₂	52.231 ₁₂₈	23.08 ₁₅₁	42.435 ₉₀	35.14 ₈₃		
	19.0	49.478 ₁₅₀	17.27 ₃₂	52.359 ₁₉₄	21.57 ₁₃₀	42.525 ₁₃₅	35.97 ₁₀₂		
	29.0	49.628 ₁₉₃	17.59 ₅₄	52.553 ₂₅₃	20.27 ₁₀₄	42.660 ₁₇₆	36.99 ₁₁₉		
June	7.9	49.821 ₂₃₀	18.13 ₇₃	52.806 ₃₀₆	19.23 ₇₄	42.836 ₂₁₃	38.18 ₁₃₂		
	17.9	50.051 ₂₆₁	18.86 ₉₁	53.112 ₃₅₀	18.49 ₄₂	43.049 ₂₄₄	39.50 ₁₄₄		
	27.9	50.312 ₂₈₆	19.77 ₁₀₇	53.462 ₃₈₄	18.07 ₉	43.293 ₂₆₈	40.94 ₁₅₁		
July	7.8	50.598 ₃₀₃	20.84 ₁₂₀	53.846 ₄₁₀	17.98 ₂₄	43.561 ₂₈₅	42.45 ₁₅₄		
	17.8	50.901 ₃₁₃	22.04 ₁₃₀	54.256 ₄₂₄	18.22 ₅₅	43.846 ₂₉₅	43.99 ₁₅₃		
	27.8	51.214 ₃₁₆	23.34 ₁₃₄	54.680 ₄₂₉	18.77 ₈₆	44.141 ₂₉₉	45.52 ₁₄₇		
Aug.	6.8	51.530 ₃₁₁	24.68 ₁₃₆	55.109 ₄₂₇	19.63 ₁₁₄	44.440 ₂₉₆	46.99 ₁₃₆		
	16.7	51.841 ₃₀₂	26.04 ₁₃₃	55.536 ₄₁₆	20.77 ₁₃₉	44.736 ₂₈₇	48.35 ₁₂₃		
	26.7	52.143 ₂₈₈	27.37 ₁₂₉	55.952 ₃₉₈	22.16 ₁₆₀	45.023 ₂₇₄	49.58 ₁₀₄		
Sept.	5.7	52.431 ₂₆₉	28.66 ₁₁₉	56.350 ₃₇₅	23.76 ₁₇₉	45.297 ₂₅₈	50.62 ₈₅		
	15.7	52.700 ₂₄₈	29.85 ₁₀₉	56.725 ₃₄₇	25.55 ₁₉₄	45.555 ₂₃₇	51.47 ₆₄		
	25.6	52.948 ₂₂₅	30.94 ₉₆	57.072 ₃₁₄	27.49 ₂₀₅	45.792 ₂₁₄	52.11 ₄₂		
Oct.	5.6	53.173 ₁₉₈	31.90 ₈₅	57.386 ₂₇₇	29.54 ₂₁₄	46.006 ₁₉₀	52.53 ₂₁		
	15.6	53.371 ₁₇₂	32.75 ₇₁	57.663 ₂₃₈	31.68 ₂₁₇	46.196 ₁₆₃	52.74 ₂		
	25.5	53.543 ₁₄₁	33.46 ₅₉	57.901 ₁₉₄	33.85 ₂₁₉	46.359 ₁₃₆	52.76 ₁₅		
Nov.	4.5	53.684 ₁₁₁	34.05 ₄₇	58.095 ₁₄₈	36.04 ₂₁₅	46.495 ₁₀₆	52.61 ₂₉		
	14.5	53.795 ₇₈	34.52 ₃₇	58.243 ₉₇	38.19 ₂₀₇	46.601 ₇₅	52.32 ₄₀		
	24.5	53.873 ₄₃	34.89 ₂₆	58.340 ₄₅	40.26 ₁₉₄	46.676 ₄₂	51.92 ₄₇		
Dec.	4.4	53.916 ₉	35.15 ₁₇	58.385 ₁₀	42.20 ₁₇₇	46.718 ₉	51.45 ₅₃		
	14.4	53.925 ₂₉	35.32 ₆	58.375 ₆₅	43.97 ₁₅₅	46.727 ₂₅	50.92 ₅₄		
	24.4	53.896 ₆₄	35.38 ₃	58.310 ₁₁₈	45.52 ₁₂₇	46.702 ₅₉	50.38 ₅₅		
	34.4	53.832	35.35	58.192	46.79	46.643	49.83		
Mean Place	50.151	26.52	53.237	31.08	43.246	44.76			
Sec δ , Tan δ	1.070	+0.381	1.543	+1.175	1.012	+0.154			
L α , L δ	+0.01	+0.3	+0.02	+0.3	0.00	+0.3			
ω α , ω δ	-0.02	+0.8	-0.05	+0.8	-0.01	+0.8			
AUTHORITY				A. E.			A. E.		

298 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	f Tauri. Mag. 4.3		ε Eridani. Mag. 3.8		45 G. Horologii. Mag. 5.6	
	R. A.	Dec. N.	R. A.	Dec. S.	R. A.	Dec. S.
	^h 3 ^m 26 ^s	[°] 12 [′] 40	^h 3 ^m 29 ^s	[°] 9 [′] 42	^h 3 ^m 30 ^s	[°] 50 [′] 37
Jan. 0.4	41.042 ⁷⁸	31.47 ⁴²	21.390 ⁸⁹	64.94 ¹²⁰	19.321 ²¹⁶	90.45 ¹⁹⁴
10.3	40.964 ¹⁰⁸	31.05 ⁴⁴	21.301 ¹¹⁹	66.14 ¹⁰⁰	19.105 ²⁵⁴	92.39 ¹⁴⁶
20.3	40.856 ¹³⁵	30.61 ⁴⁴	21.182 ¹⁴³	67.14 ⁷⁹	18.851 ²⁸⁵	93.85 ⁹⁴
30.3	40.721 ¹⁵⁶	30.17 ⁴⁴	21.039 ¹⁶²	67.93 ⁵⁴	18.566 ³⁰⁶	94.79 ⁴¹
Feb. 9.3	40.565 ¹⁶⁷	29.73 ⁴³	20.877 ¹⁷³	68.47 ²⁹	18.260 ³¹⁶	95.20 ¹⁵
19.2	40.398 ¹⁷²	29.30 ⁴⁰	20.704 ¹⁷⁶	68.76 ⁴	17.944 ³¹⁶	95.05 ⁶⁶
29.2	40.226 ¹⁶⁵	28.90 ³⁶	20.528 ¹⁷⁰	68.80 ²³	17.628 ³⁰⁵	94.39 ¹¹⁷
Mar. 10.2	40.061 ¹⁵⁰	28.54 ³⁰	20.358 ¹⁵⁴	68.57 ⁴⁸	17.323 ²⁸¹	93.22 ¹⁶⁵
20.1	39.911 ¹²⁴	28.24 ²⁰	20.204 ¹³⁰	68.09 ⁷⁵	17.042 ²⁴⁷	91.57 ²⁰⁹
30.1	39.787 ⁹¹	28.04 ⁸	20.074 ⁹⁹	67.34 ¹⁰⁰	16.795 ²⁰⁴	89.48 ²⁴⁸
Apr. 9.1	39.696 ⁵¹	27.96 ⁵	19.975 ⁶⁰	66.34 ¹²⁴	16.591 ¹⁵²	87.00 ²⁸¹
19.1	39.645 ⁷	28.01 ²²	19.915 ¹⁸	65.10 ¹⁴⁸	16.439 ⁹⁴	84.19 ³⁰⁹
29.0	39.638 ⁴⁰	28.23 ⁴⁰	19.897 ²⁷	63.62 ¹⁶⁹	16.345 ³³	81.10 ³³⁰
May 9.0	39.678 ⁸⁸	28.63 ⁵⁹	19.924 ⁷⁴	61.93 ¹⁸⁷	16.312 ³³	77.80 ³⁴⁴
19.0	39.766 ¹³²	29.22 ⁷⁷	19.998 ¹¹⁷	60.06 ²⁰²	16.345 ⁹⁶	74.36 ³⁴⁹
29.0	39.898 ¹⁷⁵	29.99 ⁹⁶	20.115 ¹⁶⁰	58.04 ²¹²	16.441 ¹⁵⁸	70.87 ³⁴⁷
June 7.9	40.073 ²¹³	30.95 ¹¹¹	20.275 ¹⁹⁷	55.92 ²¹⁷	16.599 ²¹⁶	67.40 ³³⁶
17.9	40.286 ²⁴³	32.06 ¹²⁴	20.472 ²²⁹	53.75 ²¹⁸	16.815 ²⁶⁸	64.04 ³¹⁷
27.9	40.529 ²⁶⁹	33.30 ¹³⁵	20.701 ²⁵⁵	51.57 ²¹¹	17.083 ³¹²	60.87 ²⁸⁹
July 7.8	40.798 ²⁸⁷	34.65 ¹⁴⁰	20.956 ²⁷³	49.46 ²⁰¹	17.395 ³⁴⁹	57.98 ²⁵⁴
17.8	41.085 ²⁹⁸	36.05 ¹⁴³	21.229 ²⁸⁶	47.45 ¹⁸³	17.744 ³⁷⁶	55.44 ²¹¹
27.8	41.383 ³⁰²	37.48 ¹⁴⁰	21.515 ²⁹²	45.62 ¹⁶⁰	18.120 ³⁹²	53.33 ¹⁶¹
Aug. 6.8	41.685 ³⁰⁰	38.88 ¹³³	21.807 ²⁹⁰	44.02 ¹³²	18.512 ⁴⁰⁰	51.72 ¹⁰⁸
16.7	41.985 ²⁹²	40.21 ¹²³	22.097 ²⁸⁴	42.70 ¹⁰¹	18.912 ³⁹⁵	50.64 ⁴⁹
26.7	42.277 ²⁸¹	41.44 ¹¹⁰	22.381 ²⁷¹	41.69 ⁶⁶	19.307 ³⁸⁴	50.15 ¹¹
Sept. 5.7	42.558 ²⁶⁴	42.54 ⁹⁴	22.652 ²⁵⁵	41.03 ³⁰	19.691 ³⁶⁰	50.26 ⁷⁰
15.7	42.822 ²⁴⁴	43.48 ⁷⁷	22.907 ²³⁵	40.73 ⁷	20.051 ³³⁰	50.96 ¹²⁸
25.6	43.066 ²²³	44.25 ⁵⁷	23.142 ²¹¹	40.80 ⁴²	20.381 ²⁹²	52.24 ¹⁸⁰
Oct. 5.6	43.289 ¹⁹⁸	44.82 ³⁹	23.353 ¹⁸⁶	41.22 ⁷⁴	20.673 ²⁴⁷	54.04 ²²⁷
15.6	43.487 ¹⁷²	45.21 ²³	23.539 ¹⁵⁹	41.96 ¹⁰²	20.920 ¹⁹⁸	56.31 ²⁶⁴
25.5	43.659 ¹⁴⁴	45.44 ⁷	23.698 ¹²⁹	42.98 ¹²⁴	21.118 ¹⁴⁴	58.95 ²⁹¹
Nov. 4.5	43.803 ¹¹⁵	45.51 ⁶	23.827 ⁹⁹	44.22 ¹⁴¹	21.262 ⁸⁷	61.86 ³⁰⁷
14.5	43.918 ⁸⁴	45.45 ¹⁷	23.926 ⁶⁷	45.63 ¹⁵¹	21.349 ³¹	64.93 ³¹²
24.5	44.002 ⁵⁰	45.28 ²⁵	23.993 ³³	47.14 ¹⁵³	21.380 ²⁷	68.05 ³⁰³
Dec. 4.4	44.052 ¹⁵	45.03 ³⁰	24.026 ¹	48.67 ¹⁵¹	21.353 ⁸⁴	71.08 ²⁸⁵
14.4	44.067 ¹⁹	44.73 ³⁵	24.025 ³⁴	50.18 ¹⁴¹	21.269 ¹³⁶	73.93 ²⁵⁶
24.4	44.048 ⁵⁴	44.38 ³⁸	23.991 ⁶⁸	51.59 ¹²⁸	21.133 ¹⁸⁵	76.49 ²¹⁸
34.4	43.994	44.00	23.923	52.87	20.948	78.67
Mean Place	40.472	38.24	20.920	52.21	18.520	69.47
Sec δ, Tan δ	1.025	+0.225	1.015	-0.171	1.577	-1.219
· L α, L δ	0.00	+0.2	0.00	+0.2	-0.02	+0.2
ω α, ω δ	-0.01	+0.8	+0.01	+0.8	+0.05	+0.8
AUTHORITY	A. E.		A. E.		A. N.	

APPARENT PLACES OF STARS, 1924. 299

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	♄ Eridani. Mag. 4.3		♉ Tauri. Mag. 6.2		♋ Persei. Mag. 3.1	
	R. A.	Dec. S.	R. A.	Dec. N.	R. A.	Dec. N.
	h m 3 30	° ' 21 52	h m 3 36	° ' 25 4	h m 3 37	° ' 47 32
Jan. 0.4	26.243 ₁₀₃	88.93 ₁₅₅	14.461 ₇₈	61.65 ₁₀	31.565 ₁₂₃	45.95 ₁₁₀
10.3	26.140 ₁₃₃	90.48 ₁₂₅	14.383 ₁₁₃	61.75 ₀	31.442 ₁₇₁	47.05 ₇₉
20.3	26.007 ₁₅₉	91.73 ₉₃	14.270 ₁₄₄	61.75 ₁₄	31.271 ₂₁₂	47.84 ₄₆
30.3	25.848 ₁₇₇	92.66 ₅₇	14.126 ₁₆₈	61.61 ₂₆	31.059 ₂₄₃	48.30 ₁₂
Feb. 9.3	25.671 ₁₉₀	93.23 ₂₃	13.958 ₁₈₄	61.35 ₃₉	30.816 ₂₆₂	48.42 ₂₄
19.2	25.481 ₁₉₂	93.46 ₁₄	13.774 ₁₈₉	60.96 ₄₉	30.554 ₂₆₇	48.18 ₅₉
29.2	25.289 ₁₈₇	93.32 ₅₀	13.585 ₁₈₃	60.47 ₅₉	30.287 ₂₅₉	47.59 ₉₁
Mar. 10.2	25.102 ₁₇₀	92.82 ₈₅	13.402 ₁₆₈	59.88 ₆₅	30.028 ₂₃₅	46.68 ₁₁₇
20.1	24.932 ₁₄₇	91.97 ₁₁₈	13.234 ₁₄₁	59.23 ₆₆	29.793 ₁₉₉	45.51 ₁₄₀
30.1	24.785 ₁₁₄	90.79 ₁₅₀	13.093 ₁₀₆	58.57 ₆₄	29.594 ₁₅₁	44.11 ₁₅₅
Apr. 9.1	24.671 ₇₆	89.29 ₁₇₉	12.987 ₆₂	57.93 ₅₉	29.443 ₉₅	42.56 ₁₆₂
19.1	24.595 ₃₂	87.50 ₂₀₅	12.925 ₁₆	57.34 ₄₇	29.348 ₃₁	40.94 ₁₆₄
29.0	24.563 ₁₅	85.45 ₂₂₇	12.909 ₃₅	56.87 ₃₅	29.317 ₃₄	39.30 ₁₅₇
May 9.0	24.578 ₆₂	83.18 ₂₄₅	12.944 ₈₅	56.52 ₁₇	29.351 ₁₀₀	37.73 ₁₄₅
19.0	24.640 ₁₁₀	80.73 ₂₅₈	13.029 ₁₃₅	56.35 ₂	29.451 ₁₆₅	36.28 ₁₂₆
29.0	24.750 ₁₅₃	78.15 ₂₆₅	13.164 ₁₈₀	56.37 ₂₁	29.616 ₂₂₄	35.02 ₁₀₄
June 7.9	24.903 ₁₉₄	75.50 ₂₆₆	13.344 ₂₂₃	56.58 ₄₂	29.840 ₂₇₇	33.98 ₇₈
17.9	25.097 ₂₂₈	72.84 ₂₅₉	13.567 ₂₅₄	57.00 ₆₁	30.117 ₃₂₃	33.20 ₄₈
27.9	25.325 ₂₅₇	70.25 ₂₄₇	13.821 ₂₈₃	57.61 ₇₈	30.440 ₃₅₉	32.72 ₁₉
July 7.8	25.582 ₂₇₈	67.78 ₂₂₇	14.104 ₃₀₃	58.39 ₉₄	30.799 ₃₈₆	32.53 ₁₁
17.8	25.860 ₂₉₄	65.51 ₂₀₁	14.407 ₃₁₆	59.33 ₁₀₇	31.185 ₄₀₅	32.64 ₄₀
27.8	26.154 ₃₀₁	63.50 ₁₆₉	14.723 ₃₂₂	60.40 ₁₁₅	31.590 ₄₁₃	33.04 ₆₉
Aug. 6.8	26.455 ₃₀₂	61.81 ₁₃₁	15.045 ₃₂₁	61.55 ₁₂₀	32.003 ₄₁₅	33.73 ₉₄
16.7	26.757 ₂₉₇	60.50 ₈₉	15.366 ₃₁₅	62.75 ₁₂₃	32.418 ₄₀₈	34.67 ₁₁₇
26.7	27.054 ₂₈₅	59.61 ₄₅	15.681 ₃₀₄	63.98 ₁₂₁	32.826 ₃₉₅	35.84 ₁₃₉
Sept. 5.7	27.339 ₂₆₉	59.16 ₁	15.985 ₂₈₈	65.19 ₁₁₈	33.221 ₃₇₆	37.23 ₁₅₅
15.7	27.608 ₂₄₇	59.17 ₄₅	16.273 ₂₆₈	66.37 ₁₁₁	33.597 ₃₅₂	38.78 ₁₇₀
25.6	27.855 ₂₂₃	59.62 ₈₈	16.541 ₂₄₈	67.48 ₁₀₅	33.949 ₃₂₅	40.48 ₁₈₂
Oct. 5.6	28.078 ₁₉₆	60.50 ₁₂₇	16.789 ₂₂₃	68.53 ₉₅	34.274 ₂₉₂	42.30 ₁₉₁

300 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	δ Eridani. Mag. 3·7		17 Tauri. Mag. 3·8		η Tauri. Mag. 3·0	
	R. A.	Dec. S.	R. A.	Dec. N.	R. A.	Dec. N.
	^h 3 ^m 39	[°] 10 ['] 0	^h 3 ^m 40	[°] 23 ['] 52	^h 3 ^m 42	[°] 23 ['] 52
Jan. 0·4	36·906 ₈₀	83·70 ₁₂₄	22·244 ₇₃	27·48 ₇	58·517 ₇₁	11·89 ₈
10·3	36·826 ₁₁₁	84·94 ₁₀₄	22·171 ₁₁₀	27·55 ₃	58·446 ₁₀₈	11·97 ₃
20·3	36·715 ₁₃₈	85·98 ₈₂	22·061 ₁₄₀	27·52 ₁₅	58·338 ₁₄₀	11·94 ₁₄
30·3	36·577 ₁₅₉	86·80 ₅₉	21·921 ₁₆₆	27·37 ₂₆	58·198 ₁₆₅	11·80 ₂₅
Feb. 9·3	36·418 ₁₇₂	87·39 ₃₃	21·755 ₁₈₁	27·11 ₃₇	58·033 ₁₈₁	11·55 ₃₆
19·2	36·246 ₁₇₈	87·72 ₈	21·574 ₁₈₇	26·74 ₄₆	57·852 ₁₈₈	11·19 ₄₅
29·2	36·068 ₁₇₅	87·80 ₁₉	21·387 ₁₈₄	26·28 ₅₅	57·664 ₁₈₃	10·74 ₅₃
Mar. 10·2	35·893 ₁₆₀	87·61 ₄₅	21·203 ₁₆₇	25·73 ₅₉	57·481 ₁₆₉	10·21 ₅₈
20·2	35·733 ₁₃₈	87·16 ₇₂	21·036 ₁₄₃	25·14 ₆₀	57·312 ₁₄₄	9·63 ₅₉
30·1	35·595 ₁₀₉	86·44 ₉₇	20·893 ₁₀₈	24·54 ₅₉	57·168 ₁₁₀	9·04 ₅₇
Apr. 9·1	35·486 ₇₁	85·47 ₁₂₃	20·785 ₆₆	23·95 ₅₁	57·058 ₆₈	8·47 ₅₁
19·1	35·415 ₃₀	84·24 ₁₄₆	20·719 ₁₉	23·44 ₄₁	56·990 ₂₂	7·96 ₄₁
29·0	35·385 ₁₆	82·78 ₁₆₈	20·700 ₃₀	23·03 ₂₈	56·968 ₂₈	7·55 ₂₈
May 9·0	35·401 ₆₁	81·10 ₁₈₆	20·730 ₈₀	22·75 ₁₁	56·996 ₇₈	7·27 ₁₁
19·0	35·462 ₁₀₆	79·24 ₂₀₃	20·810 ₁₃₀	22·64 ₈	57·074 ₁₂₆	7·16 ₆
29·0	35·568 ₁₄₉	77·21 ₂₁₃	20·940 ₁₇₅	22·72 ₂₇	57·200 ₁₇₃	7·22 ₂₆
June 7·9	35·717 ₁₈₇	75·08 ₂₂₀	21·115 ₂₁₆	22·99 ₄₆	57·373 ₂₁₃	7·48 ₄₅
17·9	35·904 ₂₂₀	72·88 ₂₂₁	21·331 ₂₅₀	23·45 ₆₄	57·586 ₂₄₈	7·93 ₆₃
27·9	36·124 ₂₄₈	70·67 ₂₁₆	21·581 ₂₇₈	24·09 ₈₁	57·834 ₂₇₆	8·56 ₇₉
July 7·9	36·372 ₂₆₈	68·51 ₂₀₅	21·859 ₂₉₉	24·90 ₉₆	58·110 ₂₉₈	9·35 ₉₄
17·8	36·640 ₂₈₂	66·46 ₁₈₈	22·158 ₃₁₂	25·86 ₁₀₆	58·408 ₃₁₁	10·29 ₁₀₄
27·8	36·922 ₂₉₁	64·58 ₁₆₆	22·470 ₃₁₈	26·92 ₁₁₅	58·719 ₃₁₈	11·33 ₁₁₃
Aug. 6·8	37·213 ₂₉₁	62·92 ₁₃₈	22·788 ₃₁₉	28·07 ₁₁₉	59·037 ₃₁₉	12·46 ₁₁₇
16·7	37·504 ₂₈₆	61·54 ₁₀₇	23·107 ₃₁₂	29·26 ₁₁₉	59·356 ₃₁₄	13·63 ₁₁₈
26·7	37·790 ₂₇₆	60·47 ₇₂	23·419 ₃₀₃	30·45 ₁₁₈	59·670 ₃₀₃	14·81 ₁₁₅
Sept. 5·7	38·066 ₂₆₂	59·75 ₃₅	23·722 ₂₈₇	31·63 ₁₁₃	59·973 ₂₈₉	15·96 ₁₁₁
15·7	38·328 ₂₄₄	59·40 ₂	24·009 ₂₆₉	32·76 ₁₀₄	60·262 ₂₇₁	17·07 ₁₀₄
25·6	38·572 ₂₂₃	59·42 ₃₈	24·278 ₂₄₈	33·80 ₉₇	60·533 ₂₅₀	18·11 ₉₅
Oct. 5·6	38·795 ₁₉₈	59·80 ₇₁	24·526 ₂₂₅	34·77 ₈₇	60·783 ₂₂₇	19·06 ₈₆
15·6	38·993 ₁₇₃	60·51 ₉₉	24·751 ₁₉₈	35·64 ₇₈	61·010 ₂₀₁	19·92 ₇₇
25·6	39·166 ₁₄₄	61·50 ₁₂₄	24·949 ₁₇₀	36·42 ₆₈	61·211 ₁₇₂	20·69 ₆₇
Nov. 4·5	39·310 ₁₁₄	62·74 ₁₄₀	25·119 ₁₃₈	37·10 ₅₉	61·383 ₁₄₂	21·36 ₅₈
14·5	39·424 ₈₂	64·14 ₁₅₂	25·257 ₁₀₆	37·69 ₅₀	61·525 ₁₀₈	21·94 ₅₀
24·5	39·506 ₄₉	65·66 ₁₅₅	25·363 ₇₀	38·19 ₄₂	61·633 ₇₂	22·44 ₄₁
Dec. 4·4	39·555 ₁₃	67·21 ₁₅₄	25·433 ₃₁	38·61 ₃₄	61·705 ₃₄	22·85 ₃₄
14·4	39·568 ₂₂	68·75 ₁₄₄	25·464 ₈	38·95 ₂₅	61·739 ₆	23·19 ₂₅
24·4	39·546 ₅₇	70·19 ₁₃₂	25·456 ₄₈	39·20 ₁₆	61·733 ₄₅	23·44 ₁₆
34·4	39·489	71·51	25·408	39·36	61·688	23·60
Mean Place	36·373	71·02	21·515	31·96	57·780	16·46
Sec δ, Tan δ	1·015	—0·177	1·094	+0·443	1·094	+0·443
L α, L δ	0·00	+0·2	+0·01	+0·2	+0·01	+0·2
ω α, ω δ	+0·01	+0·8	—0·02	+0·8	—0·02	+0·8
AUTHORITY	A. N.		A. N.		A. E.	

APPARENT PLACES OF STARS, 1924. 301

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	γ Hydr. Mag. 3.2		ζ Persei. Mag. 2.9		ϵ Persei. Mag. 3.0	
	R. A.	Dec. S.	R. A.	Dec. N.	R. A.	Dec. N.
	^h 3 ^m 48	[°] 74 ['] 28	^h 3 ^m 49	[°] 31 ['] 39	^h 3 ^m 52	[°] 39 ['] 47
Jan. 0.4	26.59 ⁶⁴	42.32 ²⁰⁵	21.873 ⁷⁵	29.85 ⁴⁴	45.975 ⁸⁶	28.47 ⁸⁴
10.4	25.95 ⁷³	44.37 ¹⁵²	21.798 ¹¹⁵	30.29 ²⁹	45.889 ¹³⁰	29.31 ⁶²
20.3	25.22 ⁷⁹	45.89 ⁹⁶	21.683 ¹⁵⁰	30.58 ¹¹	45.759 ¹⁷⁰	29.93 ³⁷
30.3	24.43 ⁸⁵	46.85 ³⁸	21.533 ¹⁷⁹	30.69 ⁸	45.589 ²⁰²	30.30 ⁹
Feb. 9.3	23.58 ⁸⁶	47.23 ²¹	21.354 ¹⁹⁶	30.61 ²⁷	45.387 ²²³	30.39 ¹⁷
19.2	22.72 ⁸⁶	47.02 ⁷⁸	21.158 ²⁰⁵	30.34 ⁴⁵	45.164 ²³¹	30.22 ⁴³
29.2	21.86 ⁸³	46.24 ¹³¹	20.953 ²⁰²	29.89 ⁶¹	44.933 ²²⁸	29.79 ⁶⁹
Mar. 10.2	21.03 ⁷⁸	44.93 ¹⁸²	20.751 ¹⁸⁶	29.28 ⁷⁴	44.705 ²¹²	29.10 ⁸⁹
20.2	20.25 ⁷²	43.11 ²²⁷	20.565 ¹⁶⁰	28.54 ⁸³	44.493 ¹⁸²	28.21 ¹⁰⁶
30.1	19.53 ⁶²	40.84 ²⁶⁷	20.405 ¹²⁵	27.71 ⁸⁸	44.311 ¹⁴³	27.15 ¹¹⁸
Apr. 9.1	18.91 ⁵¹	38.17 ³⁰¹	20.280 ⁸¹	26.83 ⁸⁷	44.168 ⁹⁶	25.97 ¹²³
19.1	18.40 ⁴⁰	35.16 ³²⁸	20.199 ³⁰	25.96 ⁸²	44.072 ⁴¹	24.74 ¹²³
29.1	18.00 ²⁶	31.88 ³⁴⁷	20.169 ²²	25.14 ⁷²	44.031 ¹⁸	23.51 ¹¹⁶
May 9.0	17.74 ¹³	28.41 ³⁵⁹	20.191 ⁷⁵	24.42 ⁵⁸	44.049 ⁷⁶	22.35 ¹⁰⁵
19.0	17.61 ¹	24.82 ³⁶⁴	20.266 ¹²⁸	23.84 ⁴¹	44.125 ¹³⁴	21.30 ⁸⁹
29.0	17.62 ¹⁵	21.18 ³⁵⁹	20.394 ¹⁷⁷	23.43 ²²	44.259 ¹⁸⁷	20.41 ⁶⁹
June 7.9	17.77 ²⁹	17.59 ³⁴⁵	20.571 ²²¹	23.21 ¹	44.446 ²³⁶	19.72 ⁴⁷
17.9	18.06 ⁴²	14.14 ³²⁴	20.792 ²⁵⁸	23.20 ²¹	44.682 ²⁷⁸	19.25 ²³
27.9	18.48 ⁵⁴	10.90 ²⁹³	21.050 ²⁹⁰	23.41 ⁴⁰	44.960 ³¹³	19.02 ²
July 7.9	19.02 ⁶⁴	7.97 ²⁵⁵	21.340 ³¹³	23.81 ⁶⁰	45.273 ³³⁹	19.04 ²⁵
17.8	19.66 ⁷²	5.42 ²⁰⁸	21.653 ³²⁹	24.41 ⁷⁷	45.612 ³⁵⁷	19.29 ⁴⁸
27.8	20.38 ⁷⁸	3.34 ¹⁵⁷	21.982 ³³⁸	25.18 ⁹¹	45.969 ³⁶⁸	19.77 ⁷⁰
Aug. 6.8	21.16 ⁸³	1.77 ⁹⁸	22.320 ³³⁹	26.09 ¹⁰³	46.337 ³⁷¹	20.47 ⁸⁸
16.8	21.99 ⁸⁴	0.79 ³⁹	22.659 ³³⁶	27.12 ¹¹²	46.708 ³⁶⁹	21.35 ¹⁰⁵
26.7	22.83 ⁸³	0.40 ²⁵	22.995 ³²⁶	28.24 ¹¹⁷	47.077 ³⁵⁸	22.40 ¹¹⁸
Sept. 5.7	23.66 ⁸⁰	0.65 ⁸⁸	23.321 ³¹¹	29.41 ¹²⁰	47.435 ³⁴⁴	23.58 ¹³⁰
15.7	24.46 ⁷⁴	1.53 ¹⁴⁷	23.632 ²⁹⁴	30.61 ¹²¹	47.779 ³²⁵	24.88 ¹³⁷
25.6	25.20 ⁶⁵	3.00 ²⁰³	23.926 ²⁷³	31.82 ¹²⁰	48.104 ³⁰²	26.25 ¹⁴⁴
Oct. 5.6	25.85 ⁵⁵	5.03 ²⁵⁰	24.199 ²⁴⁸	33.02 ¹¹⁷	48.406 ²⁷⁶	27.69 ¹⁴⁸
15.6	26.40 ⁴²	7.53 ²⁸⁹	24.447 ²²²	34.19 ¹¹³	48.682 ²⁴⁷	29.17 ¹⁵⁰
25.6	26.82 ²⁸	10.42 ³¹⁸	24.669 ¹⁹²	35.32 ¹⁰⁹	48.929 ²¹³	30.67 ¹⁵¹
Nov. 4.5	27.10 ¹⁴	13.60 ³³²	24.861 ¹⁵⁸	36.41 ¹⁰³	49.142 ¹⁷⁷	32.18 ¹⁴⁸
14.5	27.24 ¹	16.92 ³³⁷	25.019 ¹²²	37.44 ⁹⁶	49.319 ¹³⁶	33.66 ¹⁴⁵
24.5	27.23 ¹⁷	20.29 ³²⁷	25.141 ⁸³	38.40 ⁸⁹	49.455 ⁹¹	35.11 ¹³⁷
Dec. 4.5	27.06 ³¹	23.56 ³⁰⁵	25.224 ⁴¹	39.29 ⁸⁰	49.546 ⁴⁵	36.48 ¹²⁸
14.4	26.75 ⁴⁵	26.61 ²⁷³	25.265 ²	40.09 ⁶⁹	49.591 ⁴	37.76 ¹¹⁵
24.4	26.30 ⁵⁶	29.34 ²³¹	25.263 ⁴⁶	40.78 ⁵⁶	49.587 ⁵⁴	38.91 ⁹⁸
34.4	25.74	31.65	25.217	41.34	49.533	39.89
Mean Place	23.80	19.93	21.003	32.97	44.931	30.12
Sec δ , Tan δ	3.735	-3.599	1.175	+0.617	1.301	+0.833
L α , L δ	-0.08	+0.2	+0.01	+0.2	+0.02	+0.2
ω α , ω δ	+0.13	+0.8	-0.02	+0.8	-0.03	+0.8
AUTHORITY	A. E.		A. E.		A. E.	

302 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	γ Eridani. Mag. 3.2		A Tauri. Mag. 4.5		43 Tauri. Mag. 5.7	
	R. A.	Dec. S.	R. A.	Dec. N.	R. A.	Dec. N.
	^h 3 ^m 54	[°] 13 ['] 43	^h 4 ^m 0	[°] 21 ['] 52	^h 4 ^m 4	[°] 19 ['] 24
Jan. 0.4	29.584 ₇₅	39.03 ₁₄₅	12.715 ₅₇	26.07 ₁	44.904 ₅₂	27.13 ₉
10.4	29.509 ₁₀₈	40.48 ₁₂₂	12.658 ₉₅	26.08 ₄	44.852 ₉₀	27.04 ₁₄
20.4	29.401 ₁₃₈	41.70 ₉₇	12.563 ₁₃₀	26.04 ₁₃	44.762 ₁₂₅	26.90 ₁₈
30.3	29.263 ₁₆₁	42.67 ₇₀	12.433 ₁₅₇	25.91 ₂₁	44.637 ₁₅₄	26.72 ₂₃
Feb. 9.3	29.102 ₁₇₇	43.37 ₄₁	12.276 ₁₇₇	25.70 ₂₈	44.483 ₁₇₃	26.49 ₂₉
19.3	28.925 ₁₈₅	43.78 ₁₁	12.099 ₁₈₇	25.42 ₃₆	44.310 ₁₈₄	26.20 ₃₄
29.2	28.740 ₁₈₃	43.89 ₁₉	11.912 ₁₈₆	25.06 ₄₂	44.126 ₁₈₅	25.86 ₃₆
Mar. 10.2	28.557 ₁₇₂	43.70 ₄₈	11.726 ₁₇₅	24.64 ₄₅	43.941 ₁₇₃	25.50 ₃₉
20.2	28.385 ₁₅₁	43.22 ₇₇	11.551 ₁₅₃	24.19 ₄₇	43.768 ₁₅₃	25.11 ₃₆
30.2	28.234 ₁₂₂	42.45 ₁₀₆	11.398 ₁₂₁	23.72 ₄₄	43.615 ₁₂₃	24.75 ₃₃
Apr. 9.1	28.112 ₈₇	41.39 ₁₃₃	11.277 ₈₃	23.28 ₃₉	43.492 ₈₄	24.42 ₂₆
19.1	28.025 ₄₆	40.06 ₁₅₇	11.194 ₃₇	22.89 ₂₉	43.408 ₄₂	24.16 ₁₆
29.1	27.979 ₂	38.49 ₁₈₀	11.157 ₁₁	22.60 ₁₇	43.366 ₆	24.00 ₃
May 9.1	27.977 ₄₄	36.69 ₂₀₀	11.168 ₆₀	22.43 ₂	43.372 ₅₅	23.97 ₁₂
19.0	28.021 ₉₀	34.69 ₂₁₅	11.228 ₁₀₈	22.41 ₁₄	43.427 ₁₀₂	24.09 ₂₇
29.0	28.111 ₁₃₃	32.54 ₂₂₇	11.336 ₁₅₅	22.55 ₃₁	43.529 ₁₄₈	24.36 ₄₄
June 8.0	28.244 ₁₇₃	30.27 ₂₃₁	11.491 ₁₉₆	22.86 ₄₈	43.677 ₁₈₉	24.80 ₆₀
17.9	28.417 ₂₀₈	27.96 ₂₃₂	11.687 ₂₃₂	23.34 ₆₄	43.866 ₂₂₅	25.40 ₇₅
27.9	28.625 ₂₃₈	25.64 ₂₂₅	11.919 ₂₆₂	23.98 ₇₉	44.091 ₂₅₅	26.15 ₈₈
July 7.9	28.863 ₂₆₁	23.39 ₂₁₃	12.181 ₂₈₄	24.77 ₉₀	44.346 ₂₇₈	27.03 ₉₇
17.9	29.124 ₂₇₇	21.26 ₁₉₄	12.465 ₃₀₁	25.67 ₁₀₀	44.624 ₂₉₄	28.00 ₁₀₅
27.8	29.401 ₂₈₈	19.32 ₁₇₀	12.766 ₃₁₀	26.67 ₁₀₅	44.918 ₃₀₄	29.05 ₁₀₈
Aug. 6.8	29.689 ₂₉₂	17.62 ₁₃₉	13.076 ₃₁₄	27.72 ₁₀₈	45.222 ₃₀₈	30.13 ₁₀₉
16.8	29.981 ₂₉₀	16.23 ₁₀₅	13.390 ₃₁₁	28.80 ₁₀₆	45.530 ₃₀₇	31.22 ₁₀₄
26.7	30.271 ₂₈₂	15.18 ₆₇	13.701 ₃₀₄	29.86 ₁₀₃	45.837 ₃₀₀	32.26 ₉₈
Sept. 5.7	30.553 ₂₇₀	14.51 ₂₇	14.005 ₂₉₂	30.89 ₉₆	46.137 ₂₈₉	33.24 ₉₀
15.7	30.823 ₂₅₄	14.24 ₁₃	14.297 ₂₇₇	31.85 ₈₇	46.426 ₂₇₆	34.14 ₇₉
25.7	31.077 ₂₃₅	14.37 ₅₂	14.574 ₂₅₉	32.72 ₇₈	46.702 ₂₅₇	34.93 ₆₆
Oct. 5.6	31.312 ₂₁₁	14.89 ₈₉	14.833 ₂₃₈	33.50 ₆₈	46.959 ₂₃₈	35.59 ₅₅
15.6	31.523 ₁₈₆	15.78 ₁₂₀	15.071 ₂₁₅	34.18 ₅₇	47.197 ₂₁₅	36.14 ₄₃
25.6	31.709 ₁₅₇	16.98 ₁₄₆	15.286 ₁₈₇	34.75 ₄₈	47.412 ₁₈₈	36.57 ₃₂
Nov. 4.6	31.866 ₁₂₈	18.44 ₁₆₆	15.473 ₁₅₉	35.23 ₄₁	47.600 ₁₆₁	36.89 ₂₄
14.5	31.994 ₉₄	20.10 ₁₇₇	15.632 ₁₂₅	35.64 ₃₂	47.761 ₁₂₉	37.13 ₁₅
24.5	32.088 ₆₀	21.87 ₁₈₂	15.757 ₉₀	35.96 ₂₆	47.890 ₉₃	37.28 ₁₀
Dec. 4.5	32.148 ₂₃	23.69 ₁₇₉	15.847 ₅₂	36.22 ₂₁	47.983 ₅₅	37.38 ₅
14.4	32.171 ₁₄	25.48 ₁₆₉	15.899 ₁₁	36.43 ₁₄	48.038 ₁₅	37.43 ₀
24.4	32.157 ₅₀	27.17 ₁₅₄	15.910 ₃₀	36.57 ₉	48.053 ₂₅	37.43 ₄
34.4	32.107	28.71	15.880	36.66	48.028	37.39
Mean Place	28.980	25.55	11.917	31.71	44.148	33.45
Sec δ , Tan δ	1.029	-0.244	1.078	+0.401	1.060	+0.352
L α , L δ	-0.01	+0.2	+0.01	+0.2	+0.01	+0.2
ω α , ω δ	+0.01	+0.9	-0.01	+0.9	-0.01	+0.9
AUTHORITY	A. E.					

APPARENT PLACES OF STARS, 1924. 303

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	α^1 Eridani. Mag. 4.1		α Horologii. Mag. 3.8		α Reticuli. Mag. 3.4	
	R. A.	Dec. S.	R. A.	Dec. S.	R. A.	Dec. S.
	^h 4	^m 8	^h 4	^m 11	^h 4	^m 13
	^s 8	[°] 7	^s 8	[°] 42	^s 8	[°] 62
Jan.	0.4	9.936	29.955	71.51	28.23	70.05
	10.4	9.878	29.819	73.80	27.94	72.48
	20.4	9.784	29.640	75.68	27.58	74.44
	30.3	9.659	29.424	77.11	27.17	75.89
Feb.	9.3	9.508	29.179	78.06	26.72	76.78
	19.3	9.339	28.914	78.51	26.25	77.09
	29.2	9.159	28.638	78.46	25.76	76.84
Mar.	10.2	8.979	28.364	77.91	25.28	76.04
	20.2	8.807	28.102	76.89	24.82	74.71
	30.2	8.654	27.863	75.41	24.39	72.89
Apr.	9.1	8.528	27.657	73.51	24.02	70.63
	19.1	8.436	27.491	71.24	23.70	67.97
	29.1	8.384	27.372	68.64	23.45	64.98
May	9.1	8.375	27.306	65.77	23.28	61.72
	19.0	8.411	27.296	62.68	23.20	58.27
	29.0	8.492	27.341	59.47	23.19	54.70
June	8.0	8.616	27.442	56.18	23.28	51.10
	17.9	8.780	27.596	52.91	23.44	47.56
	27.9	8.979	27.798	49.73	23.68	44.16
July	7.9	9.208	28.043	46.73	24.00	40.99
	17.9	9.460	28.325	43.99	24.38	38.15
	27.8	9.730	28.636	41.60	24.81	35.71
Aug.	6.8	10.012	28.968	39.62	25.28	33.75
	16.8	10.299	29.313	38.12	25.78	32.34
	26.7	10.585	29.663	37.15	26.29	31.51
Sept.	5.7	10.867	30.010	36.75	26.81	31.31
	15.7	11.138	30.347	36.93	27.31	31.75
	25.7	11.396	30.665	37.70	27.79	32.81
Oct.	5.6	11.637	30.960	39.01	28.22	34.46
	15.6	11.857	31.224	40.83	28.61	36.65
	25.6	12.055	31.453	43.08	28.93	39.30
Nov.	4.6	12.227	31.640	45.70	29.17	42.30
	14.5	12.370	31.784	48.56	29.34	45.55
	24.5	12.482	31.878	51.56	29.43	48.93
Dec.	4.5	12.560	31.925	54.58	29.43	52.30
	14.4	12.602	31.919	57.52	29.34	55.54
	24.4	12.606	31.863	60.28	29.18	58.55
	34.4	12.574	31.758	62.75	28.93	61.21
Mean Place	9.282	64.77	28.985	53.27	26.43	49.75
Sec δ , Tan δ	1.008	-0.123	1.356	-0.916	2.178	-1.934
L α , L δ	0.00	+0.2	-0.02	+0.2	-0.05	+0.2
ω α , ω δ	0.00	+0.9	+0.03	+0.9	+0.06	+0.9
AUTHORITY	A. E.		A. E.		A. E.	

304 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	ν^4 Eridani. Mag. 3.6		γ Tauri. Mag. 3.9		ϵ Tauri. Mag. 3.6	
	R. A.	Dec. S.	R. A.	Dec. N.	R. A.	Dec. N.
	^h 4 ^m 14	[°] 33 ['] 58	^h 4 ^m 15	[°] 15 ['] 26	^h 4 ^m 24	[°] 19 ['] 0
Jan. 0.4	61.787 ¹⁰²	75.32 ²¹⁴	28.698 ⁴²	35.33 ²⁷	11.398 ³⁶	40.28 ⁹
10.4	61.685 ¹⁴²	77.46 ¹⁷⁹	28.656 ⁸²	35.06 ²⁸	11.362 ⁷⁷	40.19 ¹²
20.4	61.543 ¹⁷⁷	79.25 ¹⁴⁰	28.574 ¹¹⁷	34.78 ²⁸	11.285 ¹¹⁵	40.07 ¹⁵
30.3	61.366 ²⁰⁶	80.65 ⁹⁷	28.457 ¹⁴⁶	34.50 ²⁸	11.170 ¹⁴⁶	39.92 ¹⁸
Feb. 9.3	61.160 ²²⁶	81.62 ⁵¹	28.311 ¹⁶⁸	34.22 ²⁹	11.024 ¹⁶⁹	39.74 ²²
19.3	60.934 ²³⁶	82.13 ⁶	28.143 ¹⁸⁰	33.93 ²⁹	10.855 ¹⁸⁴	39.52 ²⁶
29.3	60.698 ²³⁷	82.19 ³⁹	27.963 ¹⁸³	33.64 ²⁸	10.671 ¹⁸⁸	39.26 ²⁹
Mar. 10.2	60.461 ²²⁶	81.80 ⁸³	27.780 ¹⁷⁴	33.36 ²⁶	10.483 ¹⁸⁰	38.97 ³⁰
20.2	60.235 ²⁰⁸	80.97 ¹²⁶	27.606 ¹⁵⁶	33.10 ²¹	10.303 ¹⁶²	38.67 ²⁸
30.2	60.027 ¹⁷⁸	79.71 ¹⁶⁴	27.450 ¹²⁷	32.89 ¹⁵	10.141 ¹³⁶	38.39 ²⁷
Apr. 9.1	59.849 ¹⁴¹	78.07 ²⁰⁰	27.323 ⁹²	32.74 ⁶	10.005 ¹⁰⁰	38.12 ²¹
19.1	59.708 ⁹⁷	76.07 ²³¹	27.231 ⁵⁰	32.68 ⁵	9.905 ⁵⁸	37.91 ¹³
29.1	59.611 ⁵⁰	73.76 ²⁵⁹	27.181 ⁵	32.73 ¹⁹	9.847 ¹²	37.78 ¹
May 9.1	59.561 ⁰	71.17 ²⁸¹	27.176 ⁴²	32.92 ³³	9.835 ³⁶	37.77 ¹²
19.0	59.561 ⁵²	68.36 ²⁹⁵	27.218 ⁹⁰	33.25 ⁴⁸	9.871 ⁸³	37.89 ²⁵
29.0	59.613 ¹⁰¹	65.41 ³⁰⁶	27.308 ¹³⁴	33.73 ⁶⁴	9.954 ¹²⁹	38.14 ⁴⁰
June 8.0	59.714 ¹⁴⁹	62.35 ³⁰⁶	27.442 ¹⁷⁵	34.37 ⁷⁹	10.083 ¹⁷¹	38.54 ⁵⁵
18.0	59.863 ¹⁹²	59.29 ³⁰⁰	27.617 ²¹²	35.16 ⁹¹	10.254 ²⁰⁸	39.09 ⁶⁸
27.9	60.055 ²³¹	56.29 ²⁸⁵	27.829 ²⁴¹	36.07 ¹⁰¹	10.462 ²⁴⁰	39.77 ⁷⁹
July 7.9	60.286 ²⁶²	53.44 ²⁶⁴	28.070 ²⁶⁶	37.08 ¹⁰⁸	10.702 ²⁶⁶	40.56 ⁸⁹
17.9	60.548 ²⁸⁸	50.80 ²³³	28.336 ²⁸³	38.16 ¹¹²	10.968 ²⁸⁵	41.45 ⁹⁵
27.8	60.836 ³⁰⁵	48.47 ¹⁹⁷	28.619 ²⁹⁵	39.28 ¹¹²	11.253 ²⁹⁷	42.40 ⁹⁸
Aug. 6.8	61.141 ³¹⁷	46.50 ¹⁵³	28.914 ³⁰⁰	40.40 ¹⁰⁹	11.550 ³⁰⁵	43.38 ⁹⁷
16.8	61.458 ³²¹	44.97 ¹⁰⁵	29.214 ³⁰⁰	41.49 ¹⁰¹	11.855 ³⁰⁶	44.35 ⁹³
26.8	61.779 ³¹⁸	43.92 ⁵³	29.514 ²⁹⁵	42.50 ⁹⁰	12.161 ³⁰³	45.28 ⁸⁷
Sept. 5.7	62.097 ³⁰⁸	43.39 ²	29.809 ²⁸⁷	43.40 ⁷⁸	12.464 ²⁹⁵	46.15 ⁷⁸
15.7	62.405 ²⁹³	43.41 ⁵⁵	30.096 ²⁷⁴	44.18 ⁶³	12.759 ²⁸³	46.93 ⁶⁶
25.7	62.698 ²⁷³	43.96 ¹⁰⁸	30.370 ²⁵⁹	44.81 ⁴⁸	13.042 ²⁶⁹	47.59 ⁵⁵
Oct. 5.7	62.971 ²⁴⁶	45.04 ¹⁵⁶	30.629 ²³⁹	45.29 ³²	13.311 ²⁵²	48.14 ⁴³
15.6	63.217 ²¹⁷	46.60 ¹⁹⁷	30.868 ²¹⁹	45.61 ¹⁸	13.563 ²³¹	48.57 ³²
25.6	63.434 ¹⁸³	48.57 ²³²	31.087 ¹⁹⁴	45.79 ⁷	13.794 ²⁰⁶	48.89 ²²
Nov. 4.6	63.617 ¹⁴⁵	50.89 ²⁵⁷	31.281 ¹⁶⁷	45.86 ⁴	14.000 ¹⁷⁹	49.11 ¹³
14.5	63.762 ¹⁰⁴	53.46 ²⁷²	31.448 ¹³⁵	45.82 ¹²	14.179 ¹⁴⁸	49.24 ⁷
24.5	63.866 ⁶¹	56.18 ²⁷⁶	31.583 ¹⁰²	45.70 ¹⁸	14.327 ¹¹³	49.31 ³
Dec. 4.5	63.927 ¹⁷	58.94 ²⁷¹	31.685 ⁶⁴	45.52 ²¹	14.440 ⁷⁵	49.34 ¹
14.5	63.944 ³⁰	61.65 ²⁵⁵	31.749 ²⁵	45.31 ²³	14.515 ³⁴	49.33 ⁴
24.4	63.914 ⁷³	64.20 ²³¹	31.774 ¹⁷	45.08 ²⁴	14.549 ⁸	49.29 ⁵
34.4	63.841	66.51	31.757	44.84	14.541	49.24
Mean Place	60.937	58.46	27.946	42.78	10.595	47.27
Sec δ , Tan δ	1.206	-0.674	1.037	+0.276	1.058	+0.345
L α , L δ	-0.02	+0.2	+0.01	+0.2	+0.01	+0.2
ω α , ω δ	+0.02	+0.9	-0.01	+0.9	-0.01	+0.9
AUTHORITY	A. E.		A. N.		A. E.	

APPARENT PLACES OF STARS, 1924. 305

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	α Tauri. Mag. 1·1		α Doradûs. Mag. 3·5		53 Eridani. Mag. 4·0	
	R. A.	Dec. N.	R. A.	Dec. S.	R. A.	Dec. S.
	h m 4 31	16 21	h m 4 32	55 11	h m 4 34	14 26
Jan.	0·4 34·242 _s 30	20·23 ₂₃	22·730 ₁₉₀	85·12 ₂₆₂	42·641 ₄₇	78·52 ₁₆₇
	10·4 34·212 ₇₁	20·00 ₂₃	22·540 ₂₄₈	87·74 ₂₁₈	42·594 ₈₆	80·19 ₁₄₄
	20·4 34·141 ₁₀₉	19·77 ₂₃	22·292 ₂₉₈	89·92 ₁₇₁	42·508 ₁₂₃	81·63 ₁₁₉
	30·3 34·032 ₁₄₁	19·54 ₂₃	21·994 ₃₃₇	91·63 ₁₂₀	42·385 ₁₅₁	82·82 ₉₁
Feb.	9·3 33·891 ₁₆₅	19·31 ₂₄	21·657 ₃₆₅	92·83 ₆₄	42·234 ₁₇₅	83·73 ₆₁
	19·3 33·726 ₁₈₁	19·07 ₂₅	21·292 ₃₈₀	93·47 ₁₀	42·059 ₁₈₉	84·34 ₃₀
	29·3 33·545 ₁₈₆	18·82 ₂₄	20·912 ₃₈₃	93·57 ₄₆	41·870 ₁₉₅	84·64 ₁
Mar.	10·2 33·359 ₁₈₀	18·58 ₂₃	20·529 ₃₇₂	93·11 ₉₇	41·675 ₁₈₉	84·63 ₃₁
	20·2 33·179 ₁₆₄	18·35 ₂₁	20·157 ₃₄₇	92·14 ₁₄₈	41·486 ₁₇₄	84·32 ₆₂
	30·2 33·015 ₁₃₉	18·14 ₁₅	19·810 ₃₁₂	90·66 ₁₉₄	41·312 ₁₅₁	83·70 ₉₁
Apr.	9·1 32·876 ₁₀₄	17·99 ₉	19·498 ₂₆₅	88·72 ₂₃₅	41·161 ₁₁₉	82·79 ₁₁₉
	19·1 32·772 ₆₄	17·90 ₁	19·233 ₂₁₀	86·37 ₂₇₂	41·042 ₈₂	81·60 ₁₄₆
	29·1 32·708 ₁₉	17·91 ₁₃	19·023 ₁₄₈	83·65 ₃₀₃	40·960 ₄₀	80·14 ₁₆₉
May	9·1 32·689 ₂₈	18·04 ₂₅	18·875 ₈₂	80·62 ₃₂₅	40·920 ₅	78·45 ₁₉₁
	19·0 32·717 ₇₄	18·29 ₄₀	18·793 ₁₁	77·37 ₃₄₂	40·925 ₅₀	76·54 ₂₀₈
	29·0 32·791 ₁₂₀	18·69 ₅₃	18·782 ₅₇	73·95 ₃₅₁	40·975 ₉₅	74·46 ₂₂₁
June	8·0 32·911 ₁₆₂	19·22 ₆₇	18·839 ₁₂₆	70·44 ₃₅₀	41·070 ₁₃₆	72·25 ₂₂₉
	18·0 33·073 ₁₉₈	19·89 ₇₉	18·965 ₁₉₁	66·94 ₃₄₁	41·206 ₁₇₃	69·96 ₂₃₁
	27·9 33·271 ₂₃₁	20·68 ₈₉	19·156 ₂₅₀	63·53 ₃₂₃	41·379 ₂₀₇	67·65 ₂₂₇
July	7·9 33·502 ₂₅₇	21·57 ₉₅	19·406 ₃₀₂	60·30 ₂₉₅	41·586 ₂₃₄	65·38 ₂₁₆
	17·9 33·759 ₂₇₆	22·52 ₁₀₁	19·708 ₃₄₇	57·35 ₂₆₁	41·820 ₂₅₇	63·22 ₂₀₀
	27·8 34·035 ₂₉₁	23·53 ₁₀₀	20·055 ₃₈₂	54·74 ₂₁₆	42·077 ₂₇₂	61·22 ₁₇₈
Aug.	6·8 34·326 ₂₉₈	24·53 ₉₈	20·437 ₄₀₈	52·58 ₁₆₆	42·349 ₂₈₃	59·44 ₁₄₈
	16·8 34·624 ₃₀₁	25·51 ₉₁	20·845 ₄₂₄	50·92 ₁₀₉	42·632 ₂₈₇	57·96 ₁₁₄
	26·8 34·925 ₂₉₉	26·42 ₈₂	21·269 ₄₂₈	49·83 ₄₉	42·919 ₂₈₆	56·82 ₇₆
Sept.	5·7 35·224 ₂₉₂	27·24 ₇₀	21·697 ₄₂₃	49·34 ₁₄	43·205 ₂₈₁	56·06 ₃₅
	15·7 35·516 ₂₈₃	27·94 ₅₇	22·120 ₄₀₅	49·48 ₇₆	43·486 ₂₇₀	55·71 ₆
	25·7 35·799 ₂₆₉	28·51 ₄₃	22·525 ₃₇₉	50·24 ₁₃₇	43·756 ₂₅₇	55·77 ₄₇
Oct.	5·7 36·068 ₂₅₂	28·94 ₂₈	22·904 ₃₄₃	51·61 ₁₉₂	44·013 ₂₄₀	56·24 ₈₇
	15·6 36·320 ₂₃₂	29·22 ₁₅	23·247 ₂₉₇	53·53 ₂₄₂	44·253 ₂₁₈	57·11 ₁₂₁
	25·6 36·552 ₂₁₀	29·37 ₄	23·544 ₂₄₆	55·95 ₂₈₂	44·471 ₁₉₃	58·32 ₁₅₁
Nov.	4·6 36·762 ₁₈₃	29·41 ₅	23·790 ₁₈₆	58·77 ₃₁₁	44·664 ₁₆₅	59·83 ₁₇₄
	14·5 36·945 ₁₅₃	29·36 ₁₂	23·976 ₁₂₁	61·88 ₃₂₉	44·829 ₁₃₄	61·57 ₁₈₉
	24·5 37·098 ₁₁₈	29·24 ₁₇	24·097 ₅₅	65·17 ₃₃₅	44·963 ₉₈	63·46 ₁₉₇
Dec.	4·5 37·216 ₈₁	29·07 ₁₈	24·152 ₁₅	68·52 ₃₂₇	45·061 ₆₁	65·43 ₁₉₆
	14·5 37·297 ₄₀	28·89 ₂₁	24·137 ₈₄	71·79 ₃₁₀	45·122 ₂₀	67·39 ₁₈₉
	24·4 37·337 ₁	28·68 ₂₀	24·053 ₁₅₀	74·89 ₂₈₁	45·142 ₂₀	69·28 ₁₇₅
	34·4 37·336	28·48	23·903	77·70	45·122	71·03
Mean Place	33·442	27·91	21·175	66·54	41·867	65·37
Sec δ, Tan δ	1·042	+0·293	1·752	-1·439	1·033	-0·258
L α, L δ	+0·01	+0·2	-0·03	+0·1	-0·01	+0·1
ω α, ω δ	-0·01	+0·9	+0·03	+0·9	+0·01	+0·9
AUTHORITY	A. E.		A. E.		A. E.	

306 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	τ Tauri. Mag. 4.3		μ Eridani. Mag. 4.2		π^3 Orionis. Mag. 3.3	
	R. A.	Dec. N.	R. A.	Dec. S.	R. A.	Dec. N.
	^h 4 ^m 37	[°] 22 ['] 48	^h 4 ^m 41	[°] 3 ['] 23	^h 4 ^m 45	[°] 6 ['] 49
Jan. 0.4	41.756 ₂₆	37.92 ₁₂	42.848 ₂₉	45.68 ₁₂₁	43.557 ₁₉	38.14 ₇₂
10.4	41.730 ₇₀	38.04 ₇	42.819 ₇₀	46.89 ₁₀₆	43.538 ₆₁	37.42 ₆₅
20.4	41.660 ₁₁₀	38.11 ₃	42.749 ₁₀₅	47.95 ₉₀	43.477 ₉₉	36.77 ₅₅
30.3	41.550 ₁₄₄	38.14 ₄	42.644 ₁₃₈	48.85 ₇₀	43.378 ₁₃₁	36.22 ₄₆
Feb. 9.3	41.406 ₁₇₁	38.10 ₁₁	42.506 ₁₆₂	49.55 ₅₁	43.247 ₁₅₈	35.76 ₃₆
19.3	41.235 ₁₈₉	37.99 ₁₈	42.344 ₁₇₈	50.06 ₃₁	43.089 ₁₇₄	35.40 ₂₆
29.3	41.046 ₁₉₄	37.81 ₂₅	42.166 ₁₈₄	50.37 ₁₁	42.915 ₁₈₂	35.14 ₁₆
Mar. 10.2	40.852 ₁₉₀	37.56 ₃₁	41.982 ₁₈₁	50.48 ₁₁	42.733 ₁₇₉	34.98 ₅
20.2	40.662 ₁₇₃	37.25 ₃₄	41.801 ₁₆₇	50.37 ₃₂	42.554 ₁₆₆	34.93 ₆
30.2	40.489 ₁₄₇	36.91 ₃₆	41.634 ₁₄₄	50.05 ₅₃	42.388 ₁₄₂	34.99 ₁₉
Apr. 9.2	40.342 ₁₁₃	36.55 ₃₄	41.490 ₁₁₄	49.52 ₇₄	42.246 ₁₁₂	35.18 ₃₃
19.1	40.229 ₇₁	36.21 ₃₀	41.376 ₇₇	48.78 ₉₄	42.134 ₇₅	35.51 ₄₇
29.1	40.158 ₂₅	35.91 ₂₁	41.299 ₃₆	47.84 ₁₁₅	42.059 ₃₃	35.98 ₆₃
May 9.1	40.133 ₂₄	35.70 ₁₂	41.263 ₈	46.69 ₁₃₄	42.026 ₁₂	36.61 ₇₇
19.0	40.157 ₇₂	35.58 ₀	41.271 ₅₃	45.35 ₁₅₀	42.038 ₅₇	37.38 ₉₂
29.0	40.229 ₁₁₉	35.58 ₁₄	41.324 ₉₆	43.85 ₁₆₃	42.095 ₁₀₀	38.30 ₁₀₆
June 8.0	40.348 ₁₆₃	35.72 ₂₈	41.420 ₁₃₆	42.22 ₁₇₄	42.195 ₁₄₁	39.36 ₁₁₈
18.0	40.511 ₂₀₂	36.00 ₄₁	41.556 ₁₇₄	40.48 ₁₇₉	42.336 ₁₇₉	40.54 ₁₂₆
27.9	40.713 ₂₃₅	36.41 ₅₃	41.730 ₂₀₅	38.69 ₁₈₁	42.515 ₂₁₀	41.80 ₁₃₁
July 7.9	40.948 ₂₆₃	36.94 ₆₅	41.935 ₂₃₂	36.88 ₁₇₇	42.725 ₂₃₇	43.11 ₁₃₃
17.9	41.211 ₂₈₅	37.59 ₇₃	42.167 ₂₅₄	35.11 ₁₆₇	42.962 ₂₅₉	44.44 ₁₃₀
27.9	41.496 ₂₉₉	38.32 ₇₈	42.421 ₂₆₈	33.44 ₁₅₂	43.221 ₂₇₃	45.74 ₁₂₃
Aug. 6.8	41.795 ₃₀₉	39.10 ₈₀	42.689 ₂₇₈	31.92 ₁₃₂	43.494 ₂₈₃	46.97 ₁₁₁
16.8	42.104 ₃₁₂	39.90 ₈₁	42.967 ₂₈₃	30.60 ₁₀₈	43.777 ₂₈₈	48.08 ₉₇
26.8	42.416 ₃₁₁	40.71 ₇₇	43.250 ₂₈₃	29.52 ₇₉	44.065 ₂₈₈	49.05 ₇₈
Sept. 5.7	42.727 ₃₀₆	41.48 ₇₃	43.533 ₂₇₉	28.73 ₄₈	44.353 ₂₈₅	49.83 ₅₆
15.7	43.033 ₂₉₆	42.21 ₆₆	43.812 ₂₇₀	28.25 ₁₆	44.638 ₂₇₇	50.39 ₃₃
25.7	43.329 ₂₈₃	42.87 ₅₇	44.082 ₂₅₈	28.09 ₁₆	44.915 ₂₆₅	50.72 ₁₁
Oct. 5.7	43.612 ₂₆₇	43.44 ₅₀	44.340 ₂₄₂	28.25 ₄₈	45.180 ₂₅₁	50.83 ₁₂
15.6	43.879 ₂₄₈	43.94 ₄₂	44.582 ₂₂₄	28.73 ₇₅	45.431 ₂₃₄	50.71 ₃₃
25.6	44.127 ₂₂₄	44.36 ₃₅	44.806 ₂₀₂	29.48 ₁₀₀	45.665 ₂₁₂	50.38 ₅₀
Nov. 4.6	44.351 ₁₉₈	44.71 ₃₀	45.008 ₁₇₆	30.48 ₁₁₈	45.877 ₁₈₈	49.88 ₆₄
14.6	44.549 ₁₆₆	45.01 ₂₆	45.184 ₁₄₇	31.66 ₁₃₁	46.065 ₁₅₈	49.24 ₇₃
24.5	44.715 ₁₃₀	45.27 ₂₂	45.331 ₁₁₃	32.97 ₁₃₈	46.223 ₁₂₇	48.51 ₈₀
Dec. 4.5	44.845 ₉₁	45.49 ₂₀	45.444 ₇₇	34.35 ₁₄₀	46.350 ₈₉	47.71 ₈₀
14.5	44.936 ₄₉	45.69 ₁₈	45.521 ₃₈	35.75 ₁₃₅	46.439 ₅₀	46.91 ₇₉
24.4	44.985 ₄	45.87 ₁₆	45.559 ₂	37.10 ₁₂₆	46.489 ₈	46.12 ₇₄
34.4	44.989	46.03	45.557	38.36	46.497	45.38
Mean Place	40.887	44.65	42.082	34.43	42.770	47.71
Sec δ , Tan δ	1.085	+0.421	1.002	-0.059	1.007	+0.120
L α , L δ	+0.01	+0.1	0.00	+0.1	0.00	+0.1
ω α , ω δ	-0.01	+0.9	0.00	+0.9	0.00	+0.9
AUTHORITY	A. E.		A. N.			

APPARENT PLACES OF STARS, 1924. 307

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date,	ι Aurigæ. Mag. 2.9		ε Aurigæ. Mag. 3.4-4.1		η Aurigæ. Mag. 3.3	
	R. A.	Dec. N.	R. A.	Dec. N.	R. A.	Dec. N.
	^h ^m 4 52	[°] ['] 33 2	^h ^m 4 56	[°] ['] 43 42	^h ^m 5 1	[°] ['] 41 7
Jan. 0.4	3.514 ¹⁶	44.20 ⁶⁸	31.998 ²²	40.04 ¹²⁷	12.159 ¹³	54.52 ¹¹⁴
10.4	3.498 ⁶⁷	44.88 ⁶⁰	31.976 ⁸¹	41.31 ¹¹²	12.146 ⁷¹	55.66 ¹⁰²
20.4	3.431 ¹¹³	45.48 ⁴⁸	31.895 ¹³⁴	42.43 ⁹⁴	12.075 ¹²²	56.68 ⁸⁶
30.3	3.318 ¹⁵⁴	45.96 ³⁴	31.761 ¹⁸²	43.37 ⁷¹	11.953 ¹⁶⁹	57.54 ⁶⁵
Feb. 9.3	3.164 ¹⁸⁵	46.30 ¹⁷	31.579 ²¹⁹	44.08 ⁴⁵	11.784 ²⁰⁶	58.19 ⁴³
19.3	2.979 ²⁰⁷	46.47 ⁰	31.360 ²⁴⁴	44.53 ¹⁶	11.578 ²³²	58.62 ¹⁶
29.3	2.772 ²¹⁷	46.47 ¹⁹	31.116 ²⁵⁵	44.69 ¹²	11.346 ²⁴⁴	58.78 ⁹
Mar. 10.2	2.555 ²¹⁴	46.28 ³⁵	30.861 ²⁵³	44.57 ⁴¹	11.102 ²⁴²	58.69 ³⁴
20.2	2.341 ¹⁹⁸	45.93 ⁴⁹	30.608 ²³⁶	44.16 ⁶⁶	10.860 ²²⁸	58.35 ⁵⁸
30.2	2.143 ¹⁷²	45.44 ⁶²	30.372 ²⁰⁷	43.50 ⁸⁸	10.632 ¹⁹⁹	57.77 ⁷⁸
Apr. 9.2	1.971 ¹³⁶	44.82 ⁶⁹	30.165 ¹⁶⁵	42.62 ¹⁰⁵	10.433 ¹⁶²	56.99 ⁹⁴
19.1	1.835 ⁹²	44.13 ⁷⁴	30.000 ¹¹⁶	41.57 ¹¹⁷	10.271 ¹¹⁴	56.05 ¹⁰⁴
29.1	1.743 ⁴²	43.39 ⁷³	29.884 ⁵⁹	40.40 ¹²⁴	10.157 ⁶⁰	55.01 ¹¹¹
May 9.1	1.701 ⁹	42.66 ⁶⁹	29.825 ⁰	39.16 ¹²⁵	10.097 ⁴	53.90 ¹¹¹
19.0	1.710 ⁶³	41.97 ⁶²	29.825 ⁶⁰	37.91 ¹²¹	10.093 ⁵⁵	52.79 ¹⁰⁸
29.0	1.773 ¹¹³	41.35 ⁵⁰	29.885 ¹²⁰	36.70 ¹¹³	10.148 ¹¹⁰	51.71 ⁹⁹
June 8.0	1.886 ¹⁶²	40.85 ³⁸	30.005 ¹⁷⁵	35.57 ⁹⁹	10.258 ¹⁶⁵	50.72 ⁸⁷
18.0	2.048 ²⁰⁶	40.47 ²²	30.180 ²²⁵	34.58 ⁸⁴	10.423 ²¹⁴	49.85 ⁷³
27.9	2.254 ²⁴⁴	40.25 ⁸	30.405 ²⁷⁰	33.74 ⁶⁶	10.637 ²⁵⁷	49.12 ⁵⁶
July 7.9	2.498 ²⁷⁵	40.17 ⁷	30.675 ³⁰⁸	33.08 ⁴⁷	10.894 ²⁹⁴	48.56 ³⁸
17.9	2.773 ³⁰¹	40.24 ²¹	30.983 ³³⁹	32.61 ²⁷	11.188 ³²³	48.18 ²¹
27.9	3.074 ³²⁰	40.45 ³³	31.322 ³⁶¹	32.34 ⁷	11.511 ³⁴⁶	47.97 ³
Aug. 6.8	3.394 ³³²	40.78 ⁴⁵	31.683 ³⁷⁷	32.27 ¹²	11.857 ³⁶²	47.94 ¹⁴
16.8	3.726 ³³⁹	41.23 ⁵⁴	32.060 ³⁸⁶	32.39 ³¹	12.219 ³⁷²	48.08 ³⁰
26.8	4.065 ³⁴¹	41.77 ⁶⁰	32.446 ³⁹⁰	32.70 ⁴⁷	12.591 ³⁷⁵	48.38 ⁴⁴
Sept. 5.7	4.406 ³³⁷	42.37 ⁶⁶	32.836 ³⁸⁸	33.17 ⁶³	12.966 ³⁷⁴	48.82 ⁵⁷
15.7	4.743 ³³⁰	43.03 ⁷⁰	33.224 ³⁸⁰	33.80 ⁷⁷	13.340 ³⁶⁷	49.39 ⁷⁰
25.7	5.073 ³¹⁸	43.73 ⁷²	33.604 ³⁶⁷	34.57 ⁹⁰	13.707 ³⁵⁷	50.09 ⁸⁰
Oct. 5.7	5.391 ³⁰²	44.45 ⁷⁴	33.971 ³⁵¹	35.47 ¹⁰²	14.064 ³⁴¹	50.89 ⁹⁰
15.6	5.693 ²⁸⁴	45.19 ⁷⁶	34.322 ³²⁹	36.49 ¹¹⁴	14.405 ³²¹	51.79 ⁹⁹
25.6	5.977 ²⁶⁰	45.95 ⁷⁸	34.651 ³⁰²	37.63 ¹²³	14.726 ²⁹⁷	52.78 ¹⁰⁸
Nov. 4.6	6.237 ²³¹	46.73 ⁷⁹	34.953 ²⁶⁸	38.86 ¹³²	15.023 ²⁶⁴	53.86 ¹¹⁵
14.6	6.468 ¹⁹⁷	47.52 ⁸⁰	35.221 ²²⁹	40.18 ¹³⁸	15.287 ²²⁷	55.01 ¹²¹
24.5	6.665 ¹⁵⁹	48.32 ⁸¹	35.450 ¹⁸³	41.56 ¹⁴³	15.514 ¹⁸⁴	56.22 ¹²⁶
Dec. 4.5	6.824 ¹¹⁵	49.13 ⁸¹	35.633 ¹³¹	42.99 ¹⁴⁵	15.698 ¹³⁵	57.48 ¹²⁸
14.5	6.939 ⁶⁷	49.94 ⁷⁹	35.764 ⁷⁶	44.44 ¹⁴³	15.833 ⁸¹	58.76 ¹²⁷
24.4	7.006 ¹⁷	50.73 ⁷⁵	35.840 ¹⁷	45.87 ¹³⁵	15.914 ²⁵	60.03 ¹²²
34.4	7.023	51.48	35.857	47.22	15.939	61.25
Mean Place	2.488	49.88	30.736	44.54	10.961	59.58
Sec δ, Tan δ	1.193	+0.651	1.383	+0.956	1.328	+0.873
L α, L δ	+0.02	+0.1	+0.02	+0.1	+0.02	+0.1
ω α, ω δ	-0.01	+1.0	-0.02	+1.0	-0.02	+1.0
AUTHORITY	A. E.		A. E.		A. E.	

308 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	ε Leporis. Mag. 3·3			β Eridani. Mag. 2·9			μ Leporis. Mag. 3·3		
	R. A.		Dec. S.	R. A.		Dec. S.	R. A.		Dec. S.
	h	m	° 28'	h	m	° 10'	h	m	° 17'
	5	2	22	5	4	5	5	9	16
	s		28	s		10	s		17
Jan.	0·4	15·518 ³⁷	33·22 ²¹¹	7·624 ¹⁴	71·93 ¹³⁷	31·924 ²¹	52·57 ¹⁹⁰		
	10·4	15·481 ⁸⁰	35·33 ¹⁸⁶	7·610 ⁵⁵	73·30 ¹²¹	31·903 ⁶⁴	54·47 ¹⁶⁸		
	20·4	15·401 ¹²⁰	37·19 ¹⁵⁵	7·555 ⁹⁴	74·51 ¹⁰³	31·839 ¹⁰⁵	56·15 ¹⁴²		
	30·4	15·281 ¹⁵⁵	38·74 ¹²¹	7·461 ¹³⁰	75·54 ⁸²	31·734 ¹³⁹	57·57 ¹¹²		
Feb.	9·3	15·126 ¹⁸²	39·95 ⁸⁷	7·331 ¹⁵⁷	76·36 ⁶⁰	31·595 ¹⁶⁹	58·69 ⁸²		
	19·3	14·944 ²⁰²	40·82 ⁴⁹	7·174 ¹⁷⁷	76·96 ³⁷	31·426 ¹⁸⁹	59·51 ⁴⁹		
	29·3	14·742 ²¹¹	41·31 ¹¹	6·997 ¹⁸⁶	77·33 ¹⁶	31·237 ¹⁹⁹	60·00 ¹⁷		
Mar.	10·2	14·531 ²¹¹	41·42 ²⁷	6·811 ¹⁸⁶	77·49 ⁸	31·038 ²⁰¹	60·17 ¹⁶		
	20·2	14·320 ²⁰⁰	41·15 ⁶³	6·625 ¹⁷⁷	77·41 ³⁰	30·837 ¹⁹¹	60·01 ⁴⁸		
	30·2	14·120 ¹⁷⁹	40·52 ⁹⁸	6·448 ¹⁵⁷	77·11 ⁵³	30·646 ¹⁷¹	59·53 ⁸⁰		
Apr.	9·2	13·941 ¹⁵¹	39·54 ¹³²	6·291 ¹³⁰	76·58 ⁷⁵	30·475 ¹⁴⁵	58·73 ¹⁰⁹		
	19·1	13·790 ¹¹⁵	38·22 ¹⁶³	6·161 ⁹⁵	75·83 ⁹⁷	30·330 ¹¹¹	57·64 ¹³⁷		
	29·1	13·675 ⁷⁴	36·59 ¹⁹¹	6·066 ⁵⁵	74·86 ¹¹⁷	30·219 ⁷¹	56·27 ¹⁶³		
May	9·1	13·601 ³⁰	34·68 ²¹⁶	6·011 ¹⁴	73·69 ¹³⁶	30·148 ²⁹	54·64 ¹⁸⁶		
	19·1	13·571 ¹⁵	32·52 ²³⁵	5·997 ³¹	72·33 ¹⁵³	30·119 ¹⁷	52·78 ²⁰⁶		
	29·0	13·586 ⁶¹	30·17 ²⁵⁰	6·028 ⁷⁴	70·80 ¹⁶⁷	30·136 ⁵⁹	50·72 ²²⁰		
June	8·0	13·647 ¹⁰⁵	27·67 ²⁵⁸	6·102 ¹¹⁴	69·13 ¹⁷⁷	30·195 ¹⁰³	48·52 ²³⁰		
	18·0	13·752 ¹⁴⁶	25·09 ²⁶¹	6·216 ¹⁵²	67·36 ¹⁸³	30·298 ¹⁴²	46·22 ²³⁵		
	27·9	13·898 ¹⁸²	22·48 ²⁵⁷	6·368 ¹⁸⁷	65·53 ¹⁸⁴	30·440 ¹⁷⁷	43·87 ²³²		
July	7·9	14·080 ²¹⁵	19·91 ²⁴⁴	6·555 ²¹⁵	63·69 ¹⁸⁰	30·617 ²⁰⁸	41·55 ²²³		
	17·9	14·295 ²⁴¹	17·47 ²²⁵	6·770 ²³⁹	61·89 ¹⁷⁰	30·825 ²³⁴	39·32 ²⁰⁹		
	27·9	14·536 ²⁶³	15·22 ²⁰⁰	7·009 ²⁵⁷	60·19 ¹⁵⁴	31·059 ²⁵⁵	37·23 ¹⁸⁶		
Aug.	6·8	14·799 ²⁷⁸	13·22 ¹⁶⁶	7·266 ²⁷⁰	58·65 ¹³⁴	31·314 ²⁷⁰	35·37 ¹⁵⁹		
	16·8	15·077 ²⁸⁸	11·56 ¹²⁹	7·536 ²⁷⁸	57·31 ¹⁰⁹	31·584 ²⁸⁰	33·78 ¹²³		
	26·8	15·365 ²⁹²	10·27 ⁸⁵	7·814 ²⁸¹	56·22 ⁷⁹	31·864 ²⁸⁵	32·55 ⁸⁶		
Sept.	5·8	15·657 ²⁹³	9·42 ³⁸	8·095 ²⁸¹	55·43 ⁴⁶	32·149 ²⁸⁵	31·69 ⁴⁴		
	15·7	15·950 ²⁸⁶	9·04 ¹⁰	8·376 ²⁷⁶	54·97 ¹³	32·434 ²⁸²	31·25 ¹		
	25·7	16·236 ²⁷⁷	9·14 ⁵⁷	8·652 ²⁶⁷	54·84 ²²	32·716 ²⁷³	31·26 ⁴³		
Oct.	5·7	16·513 ²⁶²	9·71 ¹⁰⁴	8·919 ²⁵⁴	55·06 ⁵⁴	32·989 ²⁶⁰	31·69 ⁸⁶		
	15·6	16·775 ²⁴²	10·75 ¹⁴⁵	9·173 ²³⁹	55·60 ⁸⁵	33·249 ²⁴⁴	32·55 ¹²³		
	25·6	17·017 ²¹⁹	12·20 ¹⁸¹	9·412 ²¹⁹	56·45 ¹¹¹	33·493 ²²²	33·78 ¹⁵⁸		
Nov.	4·6	17·236 ¹⁹¹	14·01 ²¹⁰	9·631 ¹⁹⁴	57·56 ¹³²	33·715 ¹⁹⁷	35·36 ¹⁸³		
	14·6	17·427 ¹⁵⁸	16·11 ²³⁰	9·825 ¹⁶⁶	58·88 ¹⁴⁶	33·912 ¹⁶⁷	37·19 ²⁰³		
	24·5	17·585 ¹²¹	18·41 ²⁴¹	9·991 ¹³⁴	60·34 ¹⁵⁵	34·079 ¹³²	39·22 ²¹³		
Dec.	4·5	17·706 ⁸¹	20·82 ²⁴³	10·125 ⁹⁷	61·89 ¹⁵⁶	34·211 ⁹⁴	41·35 ²¹⁶		
	14·5	17·787 ³⁸	23·25 ²³⁶	10·222 ⁵⁷	63·45 ¹⁵²	34·305 ⁵²	43·51 ²¹¹		
	24·5	17·825 ⁷	25·61 ²²⁰	10·279 ¹⁵	64·97 ¹⁴²	34·357 ⁹	45·62 ¹⁹⁷		
	34·4	17·818	27·81	10·294	66·39	34·366	47·59		
Mean Place	14·582	19·60		6·793	60·56	31·020	39·91		
Sec δ, Tan δ	1·082	—0·414		1·004	—0·091	1·042	—0·292		
L α, L δ	—0·01	+0·1		0·00	+0·1	—0·01	+0·1		
ω α, ω δ	+0·01	+1·0		0·00	+1·0	0·00	+1·0		
AUTHORITY	A. E.			A. E.					

APPARENT PLACES OF STARS, 1924. 309

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	β Orionis. Mag. 0.3		α Aurigæ. Mag. 0.2		σ Orionis. Mag. 4.6	
	R. A.	Dec. S.	R. A.	Dec. N.	R. A.	Dec. S.
	^h ^m 5 10	[°] ['] 8 17	^h ^m 5 11	[°] 45 55	^h ^m 5 17	[°] ['] 0 27
Jan. 0.4	53.928 ¹¹	29.58 ¹⁵⁴	5.648 ⁶	15.49 ¹⁴¹	53.740 ³	33.18 ¹¹⁷
10.4	53.917 ⁵³	31.12 ¹³⁶	5.642 ⁶⁹	16.90 ¹²⁸	53.743 ⁴²	34.35 ¹⁰⁴
20.4	53.864 ⁹³	32.48 ¹¹⁶	5.573 ¹²⁷	18.18 ¹¹¹	53.701 ⁸²	35.39 ⁸⁸
30.4	53.771 ¹²⁹	33.64 ⁹²	5.446 ¹⁷⁹	19.29 ⁸⁸	53.619 ¹¹⁹	36.27 ⁷⁰
Feb. 9.3	53.642 ¹⁵⁷	34.56 ⁶⁸	5.267 ²²¹	20.17 ⁶¹	53.500 ¹⁴⁹	36.97 ⁵⁴
19.3	53.485 ¹⁷⁸	35.24 ⁴³	5.046 ²⁵⁰	20.78 ³²	53.351 ¹⁷²	37.51 ³⁵
29.3	53.307 ¹⁹⁰	35.67 ¹⁷	4.796 ²⁶⁶	21.10 ¹	53.179 ¹⁸⁴	37.86 ¹⁷
Mar. 10.2	53.117 ¹⁹⁰	35.84 ⁹	4.530 ²⁶⁶	21.11 ²⁹	52.995 ¹⁸⁶	38.03 ¹
20.2	52.927 ¹⁸¹	35.75 ³⁴	4.264 ²⁵³	20.82 ⁵⁷	52.809 ¹⁷⁸	38.02 ¹⁹
30.2	52.746 ¹⁶²	35.41 ⁵⁹	4.011 ²²⁵	20.25 ⁸³	52.631 ¹⁶¹	37.83 ³⁸
Apr. 9.2	52.584 ¹³⁶	34.82 ⁸³	3.786 ¹⁸⁵	19.42 ¹⁰⁴	52.470 ¹³⁴	37.45 ⁵⁶
19.1	52.448 ¹⁰²	33.99 ¹⁰⁷	3.601 ¹³⁶	18.38 ¹¹⁹	52.336 ¹⁰¹	36.89 ⁷⁴
29.1	52.346 ⁶⁴	32.92 ¹³⁰	3.465 ⁸⁰	17.19 ¹³⁰	52.235 ⁶³	36.15 ⁹²
May 9.1	52.282 ²¹	31.62 ¹⁴⁹	3.385 ²⁰	15.89 ¹³⁵	52.172 ²¹	35.23 ¹⁰⁹
19.1	52.261 ²²	30.13 ¹⁶⁷	3.365 ⁴³	14.54 ¹³³	52.151 ²³	34.14 ¹²⁵
29.0	52.283 ⁶⁶	28.46 ¹⁸¹	3.408 ¹⁰³	13.21 ¹²⁹	52.174 ⁶⁵	32.89 ¹³⁸
June 8.0	52.349 ¹⁰⁶	26.65 ¹⁹²	3.511 ¹⁶²	11.92 ¹¹⁸	52.239 ¹⁰⁶	31.51 ¹⁴⁸
18.0	52.455 ¹⁴⁵	24.73 ¹⁹⁷	3.673 ²¹⁵	10.74 ¹⁰⁴	52.345 ¹⁴³	30.03 ¹⁵⁶
27.9	52.600 ¹⁷⁹	22.76 ¹⁹⁷	3.888 ²⁶³	9.70 ⁸⁹	52.488 ¹⁷⁸	28.47 ¹⁵⁸
July 7.9	52.779 ²⁰⁸	20.79 ¹⁹¹	4.151 ³⁰⁴	8.81 ⁷⁰	52.666 ²⁰⁸	26.89 ¹⁵⁷
17.9	52.987 ²³⁴	18.88 ¹⁸¹	4.455 ³³⁸	8.11 ⁵¹	52.874 ²³²	25.32 ¹⁵⁰
27.9	53.221 ²⁵³	17.07 ¹⁶⁴	4.793 ³⁶⁴	7.60 ³¹	53.106 ²⁵¹	23.82 ¹³⁷
Aug. 6.8	53.474 ²⁶⁷	15.43 ¹⁴¹	5.157 ³⁸⁴	7.29 ¹¹	53.357 ²⁶⁵	22.45 ¹²²
16.8	53.741 ²⁷⁶	14.02 ¹¹³	5.541 ³⁹⁶	7.18 ⁸	53.622 ²⁷⁶	21.23 ¹⁰⁰
26.8	54.017 ²⁸¹	12.89 ⁸¹	5.937 ⁴⁰³	7.26 ²⁷	53.898 ²⁸⁰	20.23 ⁷⁵
Sept. 5.8	54.298 ²⁸²	12.08 ⁴⁷	6.340 ⁴⁰⁴	7.53 ⁴⁴	54.178 ²⁸¹	19.48 ⁴⁷
15.7	54.580 ²⁷⁷	11.61 ⁹	6.744 ³⁹⁹	7.97 ⁶¹	54.459 ²⁷⁹	19.01 ¹⁶
25.7	54.857 ²⁷⁰	11.52 ²⁷	7.143 ³⁸⁹	8.58 ⁷⁷	54.738 ²⁷²	18.85 ¹³
Oct. 5.7	55.127 ²⁵⁸	11.79 ⁶⁴	7.532 ³⁷⁴	9.35 ⁹¹	55.010 ²⁶³	18.98 ⁴²
15.6	55.385 ²⁴³	12.43 ⁹⁶	7.906 ³⁵⁴	10.26 ¹⁰⁶	55.273 ²⁵⁰	19.40 ⁷⁰
25.6	55.628 ²²³	13.39 ¹²⁵	8.260 ³²⁸	11.32 ¹¹⁸	55.523 ²³⁰	20.10 ⁹²
Nov. 4.6	55.851 ²⁰⁰	14.64 ¹⁴⁷	8.588 ²⁹⁵	12.50 ¹³⁰	55.753 ²⁰⁹	21.02 ¹¹²
14.6	56.051 ¹⁷¹	16.11 ¹⁶⁴	8.883 ²⁵⁴	13.80 ¹⁴⁰	55.962 ¹⁸²	22.14 ¹²³
24.5	56.222 ¹³⁸	17.75 ¹⁷²	9.137 ²⁰⁹	15.20 ¹⁴⁸	56.144 ¹⁵¹	23.37 ¹³²
Dec. 4.5	56.360 ¹⁰¹	19.47 ¹⁷⁶	9.346 ¹⁵⁶	16.68 ¹⁵³	56.295 ¹¹⁴	24.69 ¹³³
14.5	56.461 ⁶¹	21.23 ¹⁷⁰	9.502 ⁹⁷	18.21 ¹⁵³	56.409 ⁷⁴	26.02 ¹²⁹
24.5	56.522 ¹⁸	22.93 ¹⁶¹	9.599 ³⁵	19.74 ¹⁴⁹	56.483 ³²	27.31 ¹²²
34.4	56.540	24.54	9.634	21.23	56.515	28.53
Mean Place	53.069	17.90	4.313	20.55	52.887	22.51
Sec δ , Tan δ	1.011	-0.146	1.438	+1.033	1.000	-0.008
L α , L δ	0.00	+0.1	+0.03	+0.1	0.00	+0.1
ω α , ω δ	0.00	+1.0	-0.01	+1.0	0.00	+1.0
AUTHORITY	A. E.		A. E.			

310 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	η Orionis (mean). Mag. 3.4		γ Orionis. Mag. 1.7		β Tauri. Mag. 1.8	
	R. A.	Dec. S.	R. A.	Dec. N.	R. A.	Dec. N.
	^h ^m 5 20	[°] ['] 2 27	^h ^m 5 21	[°] ['] 6 16	^h ^m 5 21	[°] ['] 28 32
Jan.	0.4 40.185 ₃	68.17 ₁₂₉	4.087 ₉	45.40 ₈₂	30.167 ₁₆	33.48 ₄₅
	10.4 40.188 ₄₀	69.46 ₁₁₃	4.096 ₃₅	44.58 ₇₂	30.183 ₃₆	33.93 ₄₄
	20.4 40.148 ₈₁	70.59 ₉₇	4.061 ₇₆	43.86 ₆₀	30.147 ₈₃	34.37 ₃₉
	30.4 40.067 ₁₁₉	71.56 ₇₇	3.985 ₁₁₅	43.26 ₄₉	30.064 ₁₂₇	34.76 ₃₂
Feb.	9.3 39.948 ₁₄₉	72.33 ₅₉	3.870 ₁₄₆	42.77 ₃₈	29.937 ₁₆₃	35.08 ₂₃
	19.3 39.799 ₁₇₂	72.92 ₃₈	3.724 ₁₇₀	42.39 ₂₅	29.774 ₁₈₉	35.31 ₁₁
	29.3 39.627 ₁₈₄	73.30 ₁₉	3.554 ₁₈₂	42.14 ₁₅	29.585 ₂₀₅	35.42 ₁
Mar.	10.3 39.443 ₁₈₈	73.49 ₂	3.372 ₁₈₅	41.99 ₃	29.380 ₂₀₇	35.41 ₁₃
	20.2 39.255 ₁₇₉	73.47 ₂₂	3.187 ₁₇₇	41.96 ₉	29.173 ₁₉₉	35.28 ₂₅
	30.2 39.076 ₁₆₃	73.25 ₄₂	3.010 ₁₆₁	42.05 ₂₁	28.974 ₁₇₈	35.03 ₃₃
Apr.	9.2 38.913 ₁₃₇	72.83 ₆₂	2.849 ₁₃₄	42.26 ₃₃	28.796 ₁₄₉	34.70 ₄₁
	19.1 38.776 ₁₀₄	72.21 ₈₁	2.715 ₁₀₀	42.59 ₄₇	28.647 ₁₁₀	34.29 ₄₅
	29.1 38.672 ₆₆	71.40 ₁₀₁	2.615 ₆₂	43.06 ₆₁	28.537 ₆₆	33.84 ₄₆
May	9.1 38.606 ₂₄	70.39 ₁₁₈	2.553 ₂₀	43.67 ₇₅	28.471 ₁₉	33.38 ₄₃
	19.1 38.582 ₁₈	69.21 ₁₃₄	2.533 ₂₃	44.42 ₈₇	28.452 ₃₁	32.95 ₃₈
	29.0 38.600 ₆₁	67.87 ₁₄₈	2.556 ₆₇	45.29 ₁₀₀	28.483 ₈₀	32.57 ₃₀
June	8.0 38.661 ₁₀₂	66.39 ₁₅₉	2.623 ₁₀₈	46.29 ₁₁₀	28.563 ₁₂₇	32.27 ₂₁
	18.0 38.763 ₁₄₀	64.80 ₁₆₅	2.731 ₁₄₆	47.39 ₁₁₈	28.690 ₁₆₉	32.06 ₁₁
	28.0 38.903 ₁₇₅	63.15 ₁₆₈	2.877 ₁₈₀	48.57 ₁₂₂	28.859 ₂₀₈	31.95 ₁
July	7.9 39.078 ₂₀₃	61.47 ₁₆₅	3.057 ₂₁₀	49.79 ₁₂₃	29.067 ₂₄₁	31.94 ₁₀
	17.9 39.281 ₂₂₉	59.82 ₁₅₇	3.267 ₂₃₅	51.02 ₁₂₀	29.308 ₂₆₉	32.04 ₁₉
	27.9 39.510 ₂₄₉	58.25 ₁₄₄	3.502 ₂₅₄	52.22 ₁₁₃	29.577 ₂₉₀	32.23 ₂₆
Aug.	6.8 39.759 ₂₆₃	56.81 ₁₂₆	3.756 ₂₆₉	53.35 ₁₀₂	29.867 ₃₀₆	32.49 ₃₃
	16.8 40.022 ₂₇₄	55.55 ₁₀₄	4.025 ₂₇₉	54.37 ₈₆	30.173 ₃₁₈	32.82 ₃₆
	26.8 40.296 ₂₇₉	54.51 ₇₆	4.304 ₂₈₄	55.23 ₆₇	30.491 ₃₂₃	33.18 ₃₈
Sept.	5.8 40.575 ₂₈₁	53.75 ₄₇	4.588 ₂₈₆	55.90 ₄₅	30.814 ₃₂₅	33.56 ₃₉
	15.7 40.856 ₂₇₉	53.28 ₁₅	4.874 ₂₈₃	56.35 ₂₃	31.139 ₃₂₃	33.95 ₃₉
	25.7 41.135 ₂₇₂	53.13 ₁₇	5.157 ₂₇₇	56.58 ₂	31.462 ₃₁₇	34.34 ₃₇
Oct.	5.7 41.407 ₂₆₃	53.30 ₄₈	5.434 ₂₆₈	56.56 ₂₄	31.779 ₃₀₇	34.71 ₃₆
	15.7 41.670 ₂₅₀	53.78 ₇₇	5.702 ₂₅₆	56.32 ₄₆	32.086 ₂₉₂	35.07 ₃₅
	25.6 41.920 ₂₃₂	54.55 ₁₀₂	5.958 ₂₃₈	55.86 ₆₄	32.378 ₂₇₄	35.42 ₃₅
Nov.	4.6 42.152 ₂₁₀	55.57 ₁₂₁	6.196 ₂₁₆	55.22 ₇₈	32.652 ₂₄₉	35.77 ₃₆
	14.6 42.362 ₁₈₃	56.78 ₁₃₅	6.412 ₁₉₀	54.44 ₈₈	32.901 ₂₂₁	36.13 ₃₈
	24.5 42.545 ₁₅₂	58.13 ₁₄₃	6.602 ₁₅₈	53.56 ₉₄	33.122 ₁₈₅	36.51 ₄₁
Dec.	4.5 42.697 ₁₁₅	59.56 ₁₄₆	6.760 ₁₂₃	52.62 ₉₄	33.307 ₁₄₄	36.92 ₄₄
	14.5 42.812 ₇₅	61.02 ₁₄₁	6.883 ₈₂	51.68 ₉₁	33.451 ₉₈	37.36 ₄₆
	24.5 42.887 ₃₃	62.43 ₁₃₃	6.965 ₃₉	50.77 ₈₅	33.549 ₄₉	37.82 ₄₉
	34.4 42.920	63.76	7.004	49.92	33.598	38.31
Mean Place	39.323	57.29	3.231	55.29	29.177	40.88
Sec δ , Tan δ	1.001	-0.043	1.006	+0.110	1.138	+0.544
L α , L δ	0.00	+0.1	0.00	+0.1	+0.01	+0.1
ω α , ω δ	0.00	+1.0	0.00	+1.0	-0.01	+1.0
AUTHORITY	A. N.		A. E.		A. E.	

APPARENT PLACES OF STARS, 1924. 311

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	β Leporis. Mag. 3.0		20 G. Pictoris. Mag. 5.5		δ Orionis. Mag. 2.5	
	R. A.	Dec. S.	R. A.	Dec. S.	R. A.	Dec. S.
	^h ^m 5 24	[°] ['] 20 48	^h ^m 5 28	[°] ['] 47 7	^h ^m 5 28	[°] ['] 0 21
Jan.	0.4 60.330 ^s	81.59 ²¹⁶	5.603 ^s	71.49 ²⁹⁸	8.259 ^s	25.73 ¹²⁰
	10.4 60.316 ¹⁴	83.75 ¹⁹³	5.527 ⁷⁶	74.47 ²⁶⁷	8.270 ¹¹	26.93 ¹⁰⁶
	20.4 60.258 ⁵⁸	85.68 ¹⁶⁴	5.393 ¹³⁴	77.14 ²²⁸	8.237 ³³	27.99 ⁹⁰
	30.4 60.156 ¹⁰²	87.32 ¹⁶⁴	5.204 ¹⁸⁹	79.42 ²²⁸	8.162 ⁷⁵	28.89 ⁹⁰
Feb.	9.3 60.016 ¹⁴⁰	88.65 ¹³³	4.969 ²³⁵	81.26 ¹⁸⁴	8.049 ¹¹³	29.61 ⁷²
	19.3 59.845 ¹⁷¹	89.64 ⁹⁹	4.696 ²⁷³	82.62 ¹³⁶	7.904 ¹⁴⁵	30.16 ⁵⁵
	29.3 59.651 ¹⁹⁴	90.28 ⁶⁴	4.395 ³⁰¹	83.47 ⁸⁵	7.735 ¹⁶⁹	30.53 ³⁷
Mar.	10.3 59.444 ²⁰⁷	90.55 ²⁷	4.079 ³¹⁶	83.81 ³⁴	7.552 ¹⁸³	30.72 ¹⁹
	20.2 59.233 ²¹¹	90.46 ⁹	3.760 ³¹⁹	83.64 ¹⁷	7.366 ¹⁸⁶	30.72 ⁰
	30.2 59.030 ²⁰³	90.01 ⁴⁵	3.449 ³¹¹	82.95 ⁶⁹	7.185 ¹⁸¹	30.54 ¹⁸
Apr.	9.2 58.843 ¹⁸⁷	89.21 ⁸⁰	3.158 ²⁹¹	81.79 ¹¹⁶	7.021 ¹⁶⁴	30.18 ³⁶
	19.1 58.682 ¹⁶¹	88.08 ¹¹³	2.898 ²⁶⁰	80.16 ¹⁶³	6.882 ¹³⁹	29.65 ⁵³
	29.1 58.553 ¹²⁹	86.64 ¹⁴⁴	2.678 ²²⁰	78.13 ²⁰³	6.774 ¹⁰⁸	28.93 ⁷²
May	9.1 58.463 ⁹⁰	84.92 ¹⁷²	2.504 ¹⁷⁴	75.71 ²⁴²	6.704 ⁷⁰	28.03 ⁹⁰
	19.1 58.415 ⁴⁸	82.94 ¹⁹⁸	2.384 ¹²⁰	72.98 ²⁷³	6.674 ³⁰	26.96 ¹⁰⁷
	29.0 58.411 ⁴	80.76 ²¹⁸	2.319 ⁶⁵	69.99 ²⁹⁹	6.688 ¹⁴	25.75 ¹²¹
June	8.0 58.451 ⁴⁰	78.40 ²³⁶	2.311 ⁸	66.81 ³¹⁸	6.744 ⁵⁶	24.41 ¹³⁴
	18.0 58.535 ⁸⁴	75.94 ²⁴⁶	2.362 ⁵¹	63.52 ³²⁹	6.840 ⁹⁶	22.96 ¹⁴⁵
	28.0 58.660 ¹²⁵	73.44 ²⁵⁰	2.468 ¹⁰⁶	60.21 ³³¹	6.974 ¹³⁴	21.44 ¹⁵²
July	7.9 58.822 ¹⁶²	70.95 ²⁴⁹	2.627 ¹⁵⁹	56.96 ³²⁵	7.144 ¹⁷⁰	19.89 ¹⁵⁵
	17.9 59.017 ¹⁹⁵	68.55 ²⁴⁰	2.835 ²⁰⁸	53.86 ³¹⁰	7.344 ²⁰⁰	18.36 ¹⁵³
	27.9 59.241 ²²⁴	66.31 ²²⁴	3.087 ²⁵²	51.00 ²⁸⁶	7.568 ²²⁴	16.89 ¹⁴⁷
Aug.	6.8 59.487 ²⁴⁶	64.31 ²⁰⁰	3.376 ²⁸⁹	48.47 ²⁵³	7.814 ²⁴⁶	15.54 ¹³⁵
	16.8 59.753 ²⁶⁶	62.60 ¹⁷¹	3.695 ³¹⁹	46.36 ²¹¹	8.075 ²⁶¹	14.35 ¹¹⁹
	26.8 60.031 ²⁷⁸	61.26 ¹³⁴	4.039 ³⁴⁴	44.74 ¹⁶²	8.347 ²⁷²	13.37 ⁹⁸
Sept.	5.8 60.317 ²⁸⁶	60.33 ⁹³	4.397 ³⁵⁸	43.66 ¹⁰⁸	8.626 ²⁷⁹	12.63 ⁷⁴
	15.7 60.607 ²⁹⁰	59.85 ⁴⁸	4.764 ³⁶⁷	43.17 ⁴⁹	8.907 ²⁸¹	12.18 ⁴⁵
	25.7 60.895 ²⁸⁸	59.83 ²	5.130 ³⁶⁶	43.31 ¹⁴	9.188 ²⁸¹	12.02 ¹⁶
Oct.	5.7 61.177 ²⁸²	60.30 ⁴⁷	5.488 ³⁵⁸	44.06 ⁷⁵	9.463 ²⁷⁵	12.16 ¹⁴
	15.7 61.448 ²⁷¹	61.22 ⁹²	5.829 ³⁴¹	45.41 ¹³⁵	9.731 ²⁶⁸	12.59 ⁴³
	25.6 61.704 ²⁵⁶	62.57 ¹³⁵	6.146 ³¹⁷	47.31 ¹⁹⁰	9.986 ²⁵⁵	13.30 ⁷¹
Nov.	4.6 61.940 ²³⁶	64.28 ¹⁷¹	6.429 ²⁸³	49.69 ²³⁸	10.224 ²³⁸	14.24 ⁹⁴
	14.6 62.151 ²¹¹	66.30 ²⁰²	6.673 ²⁴⁴	52.48 ²⁷⁹	10.441 ²¹⁷	15.37 ¹¹³
	24.5 62.331 ¹⁸⁰	68.54 ²²⁴	6.870 ¹⁹⁷	55.55 ³⁰⁷	10.632 ¹⁹¹	16.03 ¹²⁶
Dec.	4.5 62.477 ¹⁴⁶	70.91 ²³⁷	7.013 ¹⁴³	58.81 ³²⁶	10.792 ¹⁶⁰	17.96 ¹³³
	14.5 62.582 ¹⁰⁵	73.32 ²⁴¹	7.099 ⁸⁶	62.13 ³³²	10.915 ¹²³	19.32 ¹³⁶
	24.5 62.645 ⁶³	75.69 ²³⁷	7.124 ²⁵	65.40 ³²⁷	10.999 ⁸⁴	20.64 ¹³²
	34.4 62.662 ¹⁷	77.94 ²²⁵	7.088 ³⁶	68.50 ³¹⁰	11.040 ⁴¹	21.88 ¹²⁴
Mean Place	59.338	68.94	4.006	57.10	7.388	15.14
Sec δ , Tan δ	1.070	-0.380	1.470	-1.077	1.000	-0.006
L α , L δ	-0.01	+0.1	-0.03	+0.1	0.00	+0.1
ω α , ω δ	0.00	+1.0	+0.01	+1.0	0.00	+1.0
AUTHORITY	A. N.				A. E.	

312 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	α Leporis. Mag. 2.7		ι Orionis. Mag. 2.9		ϵ Orionis. Mag. 1.7	
	R. A.	Dec. S.	R. A.	Dec. S.	R. A.	Dec. S.
	^h ^m 5 29	[°] ['] 17 52	^h ^m 5 31	[°] ['] 5 57	^h ^m 5 32	[°] ['] 1 14
Jan.	0.5 23.65 ¹ ₈ 6	44.70 ²⁰⁵	43.797 ⁸	42.40 ¹⁵⁰	22.261 ¹⁵	67.86 ¹²⁶
	10.4 23.645 ⁵¹	46.75 ¹⁸⁴	43.805 ³⁴	43.90 ¹³³	22.276 ³⁰	69.12 ¹¹¹
	20.4 23.594 ⁹⁴	48.59 ¹⁵⁸	43.771 ⁷⁷	45.23 ¹¹⁵	22.246 ⁷³	70.23 ⁹⁵
	30.4 23.500 ¹³¹	50.17 ¹²⁸	43.694 ¹¹⁵	46.38 ⁹³	22.173 ¹¹¹	71.18 ⁷⁷
Feb.	9.3 23.369 ¹⁶³	51.45 ⁹⁶	43.579 ¹⁴⁷	47.31 ⁷⁰	22.062 ¹⁴⁴	71.95 ⁵⁹
	19.3 23.206 ¹⁸⁸	52.41 ⁶³	43.432 ¹⁷²	48.01 ⁴⁶	21.918 ¹⁶⁸	72.54 ³⁸
	29.3 23.018 ²⁰¹	53.04 ²⁸	43.260 ¹⁸⁵	48.47 ²³	21.750 ¹⁸²	72.92 ¹⁹
Mar.	10.3 22.817 ²⁰⁵	53.32 ⁵	43.075 ¹⁹¹	48.70 ⁰	21.568 ¹⁸⁷	73.11 ²
	20.2 22.612 ¹⁹⁹	53.27 ⁴⁰	42.884 ¹⁸⁴	48.70 ²⁴	21.381 ¹⁸²	73.13 ¹⁹
	30.2 22.413 ¹⁸²	52.87 ⁷¹	42.700 ¹⁶⁹	48.46 ⁴⁸	21.199 ¹⁶⁶	72.94 ³⁷
Apr.	9.2 22.231 ¹⁵⁹	52.16 ¹⁰³	42.531 ¹⁴⁴	47.98 ⁶⁹	21.033 ¹⁴²	72.57 ⁵⁶
	19.2 22.072 ¹²⁶	51.13 ¹³³	42.387 ¹¹⁴	47.29 ⁹²	20.891 ¹¹¹	72.01 ⁷⁴
	29.1 21.946 ⁸⁹	49.80 ¹⁶⁰	42.273 ⁷⁷	46.37 ¹¹²	20.780 ⁷⁴	71.27 ⁹³
May	9.1 21.857 ⁴⁸	48.20 ¹⁸⁴	42.196 ³⁶	45.25 ¹³²	20.706 ³³	70.34 ¹¹⁰
	19.1 21.809 ⁴	46.36 ²⁰⁵	42.160 ⁵	43.93 ¹⁴⁹	20.673 ⁹	69.24 ¹²⁵
	29.0 21.805 ³⁹	44.31 ²²¹	42.165 ⁴⁸	42.44 ¹⁶³	20.682 ⁵¹	67.99 ¹³⁸
June	8.0 21.844 ⁸²	42.10 ²³²	42.213 ⁹⁰	40.81 ¹⁷⁴	20.733 ⁹²	66.61 ¹⁴⁸
	18.0 21.926 ¹²²	39.78 ²³⁸	42.303 ¹²⁷	39.07 ¹⁸⁰	20.825 ¹²⁹	65.13 ¹⁵⁶
	28.0 22.048 ¹⁵⁹	37.40 ²³⁶	42.430 ¹⁶³	37.27 ¹⁸²	20.954 ¹⁶⁶	63.57 ¹⁵⁸
July	7.9 22.207 ¹⁹¹	35.04 ²²⁹	42.593 ¹⁹³	35.45 ¹⁷⁸	21.120 ¹⁹⁶	61.99 ¹⁵⁶
	17.9 22.398 ²²⁰	32.75 ²¹⁴	42.786 ²²⁰	33.67 ¹⁷⁰	21.316 ²²¹	60.43 ¹⁵⁰
	27.9 22.618 ²⁴³	30.61 ¹⁹³	43.006 ²⁴⁰	31.97 ¹⁵⁴	21.537 ²⁴³	58.93 ¹³⁸
Aug.	6.9 22.861 ²⁶⁰	28.68 ¹⁶⁵	43.246 ²⁵⁸	30.43 ¹³⁴	21.780 ²⁵⁸	57.55 ¹²⁰
	16.8 23.121 ²⁷⁵	27.03 ¹³¹	43.504 ²⁷⁰	29.09 ¹¹⁰	22.038 ²⁷⁰	56.35 ¹⁰⁰
	26.8 23.396 ²⁸²	25.72 ⁹³	43.774 ²⁷⁷	27.99 ⁸⁰	22.308 ²⁷⁸	55.35 ⁷⁴
Sept.	5.8 23.678 ²⁸⁷	24.79 ⁵⁰	44.051 ²⁸⁰	27.19 ⁴⁷	22.586 ²⁸¹	54.61 ⁴⁵
	15.7 23.965 ²⁸⁶	24.29 ⁵	44.331 ²⁸⁰	26.72 ¹³	22.867 ²⁸¹	54.16 ¹⁵
	25.7 24.251 ²⁸⁰	24.24 ⁴⁰	44.611 ²⁷⁵	26.59 ²³	23.148 ²⁷⁶	54.01 ¹⁶
Oct.	5.7 24.531 ²⁷⁰	24.64 ⁸⁵	44.886 ²⁶⁸	26.82 ⁵⁸	23.424 ²⁶⁹	54.17 ⁴⁶
	15.7 24.801 ²⁵⁸	25.49 ¹²⁵	45.154 ²⁵⁵	27.40 ⁸⁹	23.693 ²⁵⁶	54.63 ⁷⁴
	25.6 25.059 ²³⁷	26.74 ¹⁶⁰	45.409 ²³⁹	28.29 ¹¹⁷	23.949 ²⁴¹	55.37 ⁹⁹
Nov.	4.6 25.296 ²¹⁴	28.34 ¹⁹⁰	45.648 ²¹⁷	29.46 ¹³⁹	24.190 ²²⁰	56.36 ¹¹⁸
	14.6 25.510 ¹⁸⁵	30.24 ²¹¹	45.865 ¹⁹¹	30.85 ¹⁵⁶	24.410 ¹⁹⁴	57.54 ¹³²
	24.6 25.695 ¹⁵¹	32.35 ²²⁹	46.056 ¹⁵⁹	32.41 ¹⁶⁵	24.604 ¹⁶³	58.86 ¹⁴⁰
Dec.	4.5 25.846 ¹¹²	34.59 ²²⁴	46.215 ¹²³	34.06 ¹⁶⁸	24.767 ¹²⁷	60.26 ¹⁴¹
	14.5 25.958 ⁶⁹	36.88 ²²⁵	46.338 ⁸³	35.74 ¹⁶⁵	24.894 ⁸⁸	61.67 ¹³⁹
	24.5 26.027 ²⁵	39.13 ²¹⁴	46.421 ⁴⁰	37.39 ¹⁵⁵	24.982 ⁴⁴	63.06 ¹³⁰
	34.4 26.052	41.27	46.461	38.94	25.026	64.36
Mean Place	22.677	32.47	42.900	31.31	21.382	57.21
Sec δ , Tan δ	1.051	-0.323	1.005	-0.104	1.000	-0.022
L α , L δ	-0.01	+0.1	0.00	0.0	0.00	0.0
ω α , ω δ	0.00	+1.0	0.00	+1.0	0.00	+1.0
AUTHORITY	A. E.		A. E.		A. E.	

APPARENT PLACES OF STARS, 1924. 313

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	β Doradus. Mag. 3.8		ζ Tauri. Mag. 3.0		ζ Orionis. Mag. 2.0	
	R. A.	Dec. S.	R. A.	Dec. N.	R. A.	Dec. S.
	^h 5	^m 32	^h 5	^m 33	^h 5	^m 36
	^s 58	^s 32	^s 33	^s 21	^s 5	^s 58
Jan. 0.5	60.58	17 37.74	7.045	26 42.22	56.308	17 65.03
10.4	60.41	25 40.93	7.071	22 42.24	56.325	27 66.33
20.4	60.16	32 43.78	7.049	69 42.29	56.298	70 67.49
30.4	59.84	39 46.23	6.980	112 42.36	56.228	109 68.49
Feb. 9.3	59.45	44 48.21	6.868	147 42.44	56.119	142 69.28
19.3	59.01	48 49.68	6.721	174 42.50	55.977	167 69.90
29.3	58.53	50 50.61	6.547	191 42.53	55.810	183 70.31
Mar. 10.3	58.03	49 51.00	6.356	195 42.52	55.627	188 70.52
20.2	57.54	49 50.84	6.161	190 42.47	55.439	183 70.54
30.2	57.05	47 50.13	5.971	172 42.38	55.256	168 70.35
Apr. 9.2	56.58	42 48.91	5.799	146 42.27	55.088	145 69.98
19.2	56.16	37 47.20	5.653	112 42.15	54.943	114 69.41
29.1	55.79	31 45.04	5.541	72 42.03	54.829	77 68.65
May 9.1	55.48	24 42.50	5.469	27 41.95	54.752	38 67.71
19.1	55.24	16 39.61	5.442	18 41.92	54.714	5 66.60
29.0	55.08	8 36.46	5.460	64 41.96	54.719	47 65.32
June 8.0	55.00	0 33.11	5.524	109 42.07	54.766	87 63.91
18.0	55.00	8 29.64	5.633	149 42.28	54.853	126 62.40
28.0	55.08	17 26.15	5.782	186 42.56	54.979	161 60.82
July 7.9	55.25	24 22.72	5.968	218 42.92	55.140	191 59.21
17.9	55.49	31 19.46	6.186	245 43.35	55.331	218 57.62
27.9	55.80	37 16.45	6.431	267 43.82	55.549	239 56.10
Aug. 6.9	56.17	42 13.80	6.698	284 44.31	55.788	259 54.70
16.8	56.59	46 11.57	6.982	295 44.80	56.044	268 53.47
26.8	57.05	49 9.87	7.277	303 45.26	56.312	276 52.47
Sept. 5.8	57.54	51 8.74	7.580	306 45.67	56.588	280 51.73
15.7	58.05	51 8.21	7.886	306 46.01	56.868	281 51.28
25.7	58.56	50 8.36	8.192	301 46.26	57.149	277 51.14
Oct. 5.7	59.06	48 9.15	8.493	294 46.43	57.426	270 51.31
15.7	59.54	43 10.56	8.787	283 46.51	57.696	259 51.80
25.6	59.97	38 12.56	9.070	266 46.52	57.955	243 52.58
Nov. 4.6	60.35	32 15.08	9.336	245 46.47	58.198	223 53.60
14.6	60.67	25 18.02	9.581	219 46.39	58.421	198 54.83
24.6	60.92	16 21.28	9.800	186 46.28	58.619	168 56.19
Dec. 4.5	61.08	7 24.73	9.986	148 46.19	58.787	131 57.64
14.5	61.15	2 28.26	10.134	105 46.13	58.918	91 59.11
24.5	61.13	11 31.74	10.239	59 46.10	59.009	49 60.55
34.4	61.02	35.05	10.298	59 46.12	59.058	49 61.91
Mean Place	57.94	23.15	6.117	50.73	55.417	54.36
Sec δ , Tan δ	2.168	-1.924	1.072	+0.386	1.001	-0.035
L α , L δ	-0.05	0.0	+0.01	0.0	0.00	0.0
ω α , ω δ	+0.01	+1.0	0.00	+1.0	0.00	+1.0
AUTHORITY	A. E.		A. E.			

314 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	α Columbæ. Mag. 2.7		ι 30 Tauri. Mag. 5.5		κ Orionis. Mag. 2.2	
	R. A.	Dec. S.	R. A.	Dec. N.	R. A.	Dec. S.
	^h ^m 5 36	[°] ['] 34 6	^h ^m 5 42	[°] ['] 17 41	^h ^m 5 44	[°] ['] 9 41
Jan.	0.5 55.064 ₂₇	63.16 ₂₇₁	61.212 ₃₅	58.10 ₁₉	10.040 ₁₇	55.03 ₁₇₃
	10.4 55.037 ₇₇	65.87 ₂₄₄	61.247 ₁₃	57.91 ₁₃	10.057 ₂₈	56.76 ₁₅₆
	20.4 54.960 ₁₂₅	68.31 ₂₁₁	61.234 ₅₉	57.78 ₈	10.029 ₇₁	58.32 ₁₃₄
	30.4 54.835 ₁₆₈	70.42 ₁₇₃	61.175 ₁₀₃	57.70 ₄	9.958 ₁₁₂	59.66 ₁₁₀
Feb.	9.4 54.667 ₂₂₂	72.15 ₁₃₀	61.072 ₁₄₀	57.66 ₂	9.846 ₁₄₄	60.76 ₈₄
	19.3 54.465 ₂₂₉	73.45 ₈₇	60.932 ₁₆₇	57.64 ₁	9.702 ₁₇₂	61.60 ₅₇
	29.3 54.236 ₂₄₅	74.32 ₄₁	60.765 ₁₈₅	57.63 ₁	9.530 ₁₈₇	62.17 ₃₁
Mar.	10.3 53.991 ₂₅₀	74.73 ₄	60.580 ₁₉₂	57.62 ₁	9.343 ₁₉₄	62.48 ₃
	20.2 53.741 ₂₄₄	74.69 ₄₉	60.388 ₁₈₈	57.61 ₁	9.149 ₁₉₀	62.51 ₂₄
	30.2 53.497 ₂₂₈	74.20 ₉₂	60.200 ₁₇₃	57.60 ₁	8.959 ₁₇₇	62.27 ₄₉
Apr.	9.2 53.269 ₂₀₃	73.28 ₁₃₃	60.027 ₁₄₉	57.59 ₀	8.782 ₁₅₄	61.78 ₇₆
	19.2 53.066 ₁₇₀	71.95 ₁₇₂	59.878 ₁₁₆	57.59 ₃	8.628 ₁₂₅	61.02 ₁₀₀
	29.1 52.896 ₁₃₀	70.23 ₂₀₆	59.762 ₇₈	57.62 ₉	8.503 ₈₉	60.02 ₁₂₃
May	9.1 52.766 ₈₅	68.17 ₂₃₆	59.684 ₃₅	57.71 ₁₄	8.414 ₅₀	58.79 ₁₄₄
	19.1 52.681 ₃₉	65.81 ₂₆₁	59.649 ₉	57.85 ₂₁	8.364 ₈	57.35 ₁₆₂
	29.1 52.642 ₁₀	63.20 ₂₈₀	59.658 ₅₄	58.06 ₃₀	8.356 ₃₄	55.73 ₁₇₈
June	8.0 52.652 ₅₈	60.40 ₂₉₂	59.712 ₉₆	58.36 ₃₈	8.390 ₇₅	53.95 ₁₈₉
	18.0 52.710 ₁₀₄	57.48 ₂₉₈	59.808 ₁₃₇	58.74 ₄₆	8.465 ₁₁₃	52.06 ₁₉₆
	28.0 52.814 ₁₄₇	54.50 ₂₉₄	59.945 ₁₇₃	59.20 ₅₁	8.578 ₁₄₉	50.10 ₁₉₇
July	7.9 52.961 ₁₈₇	51.56 ₂₈₃	60.118 ₂₀₅	59.71 ₅₇	8.727 ₁₈₂	48.13 ₁₉₃
	17.9 53.148 ₂₂₁	48.73 ₂₆₄	60.323 ₂₃₃	60.28 ₅₈	8.909 ₂₀₉	46.20 ₁₈₃
	27.9 53.369 ₂₅₂	46.09 ₂₃₆	60.556 ₂₅₄	60.86 ₅₉	9.118 ₂₃₂	44.37 ₁₆₇
Aug.	6.9 53.621 ₂₇₅	43.73 ₂₀₀	60.810 ₂₇₂	61.45 ₅₅	9.350 ₂₅₀	42.70 ₁₄₅
	16.8 53.896 ₂₉₅	41.73 ₁₅₈	61.082 ₂₈₅	62.00 ₄₉	9.600 ₂₆₅	41.25 ₁₁₈
	26.8 54.191 ₃₀₇	40.15 ₁₀₉	61.367 ₂₉₃	62.49 ₄₀	9.865 ₂₇₄	40.07 ₈₅
Sept.	5.8 54.498 ₃₁₄	39.06 ₅₆	61.660 ₂₉₉	62.89 ₃₀	10.139 ₂₈₀	39.22 ₅₀
	15.8 54.812 ₃₁₆	38.50 ₁	61.959 ₂₉₉	63.19 ₁₈	10.419 ₂₈₂	38.72 ₁₁
	25.7 55.128 ₃₁₀	38.49 ₅₅	62.258 ₂₉₈	63.37 ₆	10.701 ₂₇₉	38.61 ₂₇
Oct.	5.7 55.438 ₃₀₀	39.04 ₁₁₁	62.556 ₂₉₁	63.43 ₆	10.980 ₂₇₂	38.88 ₆₅
	15.7 55.738 ₂₈₂	40.15 ₁₆₁	62.847 ₂₈₂	63.37 ₁₇	11.252 ₂₆₂	39.53 ₁₀₀
	25.6 56.020 ₂₆₀	41.76 ₂₀₆	63.129 ₂₆₇	63.20 ₂₅	11.514 ₂₄₆	40.53 ₁₃₁
Nov.	4.6 56.280 ₂₃₀	43.82 ₂₄₄	63.396 ₂₄₇	62.95 ₃₀	11.760 ₂₂₆	41.84 ₁₅₇
	14.6 56.510 ₁₉₅	46.26 ₂₇₂	63.643 ₂₂₃	62.65 ₃₄	11.986 ₂₀₀	43.41 ₁₇₆
	24.6 56.705 ₁₅₄	48.98 ₂₉₀	63.866 ₁₉₁	62.31 ₃₄	12.186 ₁₆₉	45.17 ₁₈₇
Dec.	4.5 56.859 ₁₀₈	51.88 ₂₉₇	64.057 ₁₅₅	61.97 ₃₁	12.355 ₁₃₂	47.04 ₁₉₁
	14.5 56.967 ₅₉	54.85 ₂₉₄	64.212 ₁₁₃	61.66 ₂₆	12.487 ₉₂	48.95 ₁₈₉
	24.5 57.026 ₇	57.79 ₂₈₁	64.325 ₆₇	61.40 ₂₁	12.579 ₄₈	50.84 ₁₇₉
	34.5 57.033	60.60	64.392	61.19	12.627	52.63
Mean Place	53.818	50.06	60.300	67.11	9.101	43.88
Sec δ , Tan δ	1.208	-0.677	1.050	+0.319	1.014	-0.171
L α , L δ	-0.02	0.0	+0.01	0.0	0.00	0.0
ω α , ω δ	0.00	+1.0	0.00	+1.0	0.00	+1.0
AUTHORITY	A. E.		A. N.		A. E.	

APPARENT PLACES OF STARS, 1924. 315

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	β Columbæ. Mag. 3.2		α Orionis. Mag. 1.0-1.4		β Aurigæ. Mag. 2.1	
	R. A.	Dec. S.	R. A.	Dec. N.	R. A.	Dec. N.
	^h ^m 5 48	[°] ['] 35 47	^h ^m 5 51	[°] ['] 7 23	^h ^m 5 53	[°] ['] 44 56
Jan. 0.5	18.078 ¹⁷	58.28 ²⁸¹	4.310 ³⁸	29.11 ⁸⁰	58.564 ⁵²	21.61 ¹⁴²
10.4	18.061 ⁷¹	61.09 ²⁵⁵	4.348 ⁹	28.31 ⁷¹	58.616 ¹⁴	23.03 ¹³⁸
20.4	17.990 ¹²⁰	63.64 ²²³	4.339 ⁵⁵	27.60 ⁵⁹	58.602 ⁷⁸	24.41 ¹²⁸
30.4	17.870 ¹⁶⁵	65.87 ¹⁸⁴	4.284 ⁹⁶	27.01 ⁴⁶	58.524 ¹³⁶	25.69 ¹¹⁴
Feb. 9.4	17.705 ²⁰³	67.71 ¹⁴³	4.188 ¹³¹	26.55 ³⁵	58.388 ¹⁸⁶	26.83 ⁹⁴
19.3	17.502 ²³¹	69.14 ⁹⁸	4.057 ¹⁶⁰	26.20 ²³	58.202 ²²⁶	27.77 ⁷⁰
29.3	17.271 ²⁵⁰	70.12 ⁵³	3.897 ¹⁷⁸	25.97 ¹²	57.976 ²⁵¹	28.47 ⁴²
Mar. 10.3	17.021 ²⁵⁷	70.65 ⁶	3.719 ¹⁸⁶	25.85 ¹	57.725 ²⁶³	28.89 ¹³
20.3	16.764 ²⁵³	70.71 ³⁹	3.533 ¹⁸³	25.84 ⁹	57.462 ²⁵⁹	29.02 ¹⁵
30.2	16.511 ²³⁹	70.32 ⁸⁴	3.350 ¹⁷⁰	25.93 ¹⁹	57.203 ²⁴³	28.87 ⁴³
Apr. 9.2	16.272 ²¹⁵	69.48 ¹²⁷	3.180 ¹⁴⁹	26.12 ³⁰	56.960 ²¹²	28.44 ⁶⁷
19.2	16.057 ¹⁸³	68.21 ¹⁶⁶	3.031 ¹¹⁸	26.42 ⁴¹	56.748 ¹⁷¹	27.77 ⁸⁸
29.1	15.874 ¹⁴⁵	66.55 ²⁰¹	2.913 ⁸³	26.83 ⁵³	56.577 ¹²²	26.89 ¹⁰⁵
May 9.1	15.729 ¹⁰⁰	64.54 ²³⁴	2.830 ⁴⁴	27.36 ⁶⁵	56.455 ⁶⁸	25.84 ¹¹⁶
19.1	15.629 ⁵⁴	62.20 ²⁶¹	2.786 ²	28.01 ⁷⁶	56.387 ¹⁰	24.68 ¹²³
29.1	15.575 ⁵	59.59 ²⁸¹	2.784 ⁴¹	28.77 ⁸⁷	56.377 ⁴⁸	23.45 ¹²⁵
June 8.0	15.570 ⁴³	56.78 ²⁹⁵	2.825 ⁸²	29.64 ⁹⁵	56.425 ¹⁰⁶	22.20 ¹²²
18.0	15.613 ⁹⁰	53.83 ³⁰²	2.907 ¹²⁰	30.59 ¹⁰³	56.531 ¹⁶⁰	20.98 ¹¹⁶
28.0	15.703 ¹³⁵	50.81 ³⁰⁰	3.027 ¹⁵⁵	31.62 ¹⁰⁶	56.691 ²⁰⁹	19.82 ¹⁰⁷
July 8.0	15.838 ¹⁷⁵	47.81 ²⁹⁰	3.182 ¹⁸⁷	32.68 ¹⁰⁸	56.900 ²⁵⁵	18.75 ⁹⁶
17.9	16.013 ²¹³	44.91 ²⁷²	3.369 ²¹⁴	33.76 ¹⁰⁵	57.155 ²⁹²	17.79 ⁸²
27.9	16.226 ²⁴⁴	42.19 ²⁴⁶	3.583 ²³⁷	34.81 ⁹⁸	57.447 ³²⁴	16.97 ⁶⁸
Aug. 6.9	16.470 ²⁷¹	39.73 ²⁰⁹	3.820 ²⁵⁵	35.79 ⁸⁸	57.771 ³⁵¹	16.29 ⁵²
16.8	16.741 ²⁹¹	37.64 ¹⁶⁸	4.075 ²⁶⁸	36.67 ⁷⁴	58.122 ³⁷¹	15.77 ³⁷
26.8	17.032 ³⁰⁷	35.96 ¹²⁰	4.343 ²⁷⁹	37.41 ⁵⁶	58.493 ³⁸⁶	15.40 ²¹
Sept. 5.8	17.339 ³¹⁷	34.76 ⁶⁵	4.622 ²⁸⁴	37.97 ³⁵	58.879 ³⁹⁵	15.19 ⁶
15.8	17.656 ³²²	34.11 ¹⁰	4.906 ²⁸⁷	38.32 ¹³	59.274 ³⁹⁹	15.13 ¹⁰
25.7	17.978 ³¹⁶	34.01 ⁴⁸	5.193 ²⁸⁵	38.45 ⁹	59.673 ³⁹⁸	15.23 ²⁵
Oct. 5.7	18.294 ³⁰⁹	34.49 ¹⁰⁴	5.478 ²⁸¹	38.36 ³²	60.071 ³⁹²	15.48 ⁴¹
15.7	18.603 ²⁹³	35.53 ¹⁵⁷	5.759 ²⁷²	38.04 ⁵²	60.463 ³⁸⁰	15.89 ⁵⁷
25.6	18.896 ²⁷²	37.10 ²⁰³	6.031 ²⁵⁹	37.52 ⁶⁹	60.843 ³⁶²	16.46 ⁷²
Nov. 4.6	19.168 ²⁴³	39.13 ²⁴³	6.290 ²⁴¹	36.83 ⁸³	61.205 ³³⁶	17.18 ⁸⁹
14.6	19.411 ²⁰⁸	41.56 ²⁷⁴	6.531 ²¹⁶	36.00 ⁹³	61.541 ³⁰³	18.07 ¹⁰⁴
24.6	19.619 ¹⁶⁷	44.30 ²⁹⁴	6.747 ¹⁸⁸	35.07 ⁹⁷	61.844 ²⁶²	19.11 ¹¹⁹
Dec. 4.5	19.786 ¹²¹	47.24 ³⁰³	6.935 ¹⁵²	34.10 ⁹⁷	62.106 ²¹²	20.30 ¹³⁰
14.5	19.907 ⁷⁰	50.27 ³⁰²	7.087 ¹¹³	33.13 ⁹³	62.318 ¹⁵⁶	21.60 ¹³⁹
24.5	19.977 ¹⁷	53.29 ²⁹⁰	7.200 ⁶⁸	32.20 ⁸⁵	62.474 ⁹⁵	22.99 ¹⁴⁴
34.5	19.994	56.19	7.268	31.35	62.569	24.43
Mean Place	16.755	45.76	3.419	38.98	57.278	29.03
Sec δ , Tan δ	1.233	-0.721	1.008	+0.130	1.413	+0.998
L α , L δ	-0.02	0.0	0.00	0.0	+0.03	0.0
ω α , ω δ	0.00	+1.0	0.00	+1.0	0.00	+1.0
AUTHORITY	A. N.		A. E.		A. E.	

316 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	θ Aurigæ. Mag. 2.7		ι Geminorum. Mag. 4.3		ν Orionis. Mag. 4.4	
	R. A.	Dec. N.	R. A.	Dec. N.	R. A.	Dec. N.
	^h ^m 5 54	[°] ['] 37 12	^h ^m 5 59	[°] ['] 23 15	^h ^m 6 3	[°] ['] 14 46
Jan. 0.5	33.443 ⁵²	23.48 ⁹⁷	30.988 ⁵⁴	58.57 ¹²	14.904 ⁵³	34.29 ⁴⁰
10.4	33.495 ⁶	24.45 ⁹⁶	31.042 ³	58.69 ¹⁷	14.957 ⁵	33.89 ³²
20.4	33.489 ⁶⁴	25.41 ⁹¹	31.045 ⁴⁸	58.86 ²²	14.962 ⁴⁴	33.57 ²²
30.4	33.425 ¹¹⁶	26.32 ⁸²	30.997 ⁹⁴	59.08 ²³	14.918 ⁸⁷	33.35 ¹⁵
Feb. 9.4	33.309 ¹⁶⁰	27.14 ⁶⁸	30.903 ¹³⁵	59.31 ²¹	14.831 ¹²⁶	33.20 ⁹
19.3	33.149 ¹⁹⁷	27.82 ⁵¹	30.768 ¹⁶⁶	59.52 ¹⁸	14.705 ¹⁵⁷	33.11 ³
29.3	32.952 ²²⁰	28.33 ³²	30.602 ¹⁸⁸	59.70 ¹³	14.548 ¹⁷⁸	33.08 ¹
Mar. 10.3	32.732 ²³⁰	28.65 ¹⁰	30.414 ¹⁹⁸	59.83 ⁷	14.370 ¹⁸⁸	33.09 ³
20.3	32.502 ²²⁸	28.75 ¹⁰	30.216 ¹⁹⁷	59.90 ¹	14.182 ¹⁸⁸	33.12 ⁷
30.2	32.274 ²¹²	28.65 ³¹	30.019 ¹⁸⁴	59.91 ⁶	13.994 ¹⁷⁶	33.19 ⁹
Apr. 9.2	32.062 ¹⁸⁵	28.34 ⁴⁷	29.835 ¹⁶²	59.85 ⁹	13.818 ¹⁵⁵	33.28 ¹²
19.2	31.877 ¹⁵⁰	27.87 ⁶³	29.673 ¹³⁰	59.76 ¹³	13.663 ¹²⁷	33.40 ¹⁷
29.1	31.727 ¹⁰⁵	27.24 ⁷³	29.543 ⁹²	59.63 ¹⁴	13.536 ⁹¹	33.57 ²³
May 9.1	31.622 ⁵⁶	26.51 ⁸⁰	29.451 ⁵⁰	59.49 ¹³	13.445 ⁵²	33.80 ²⁹
19.1	31.566 ⁴	25.71 ⁸³	29.401 ⁵	59.36 ⁹	13.393 ⁹	34.09 ³⁵
29.1	31.562 ⁴⁸	24.88 ⁸³	29.396 ⁴⁰	59.27 ⁴	13.384 ³³	34.44 ⁴³
June 8.0	31.610 ⁹⁹	24.05 ⁸⁰	29.436 ⁸⁵	59.23 ¹	13.417 ⁷⁶	34.87 ⁵⁰
18.0	31.709 ¹⁴⁸	23.25 ⁷³	29.521 ¹²⁶	59.24 ⁷	13.493 ¹¹⁵	35.37 ⁵⁶
28.0	31.857 ¹⁹¹	22.52 ⁶⁵	29.647 ¹⁶⁵	59.31 ¹³	13.608 ¹⁵²	35.93 ⁶¹
July 8.0	32.048 ²³¹	21.87 ⁵⁵	29.812 ¹⁹⁸	59.44 ¹⁸	13.760 ¹⁸⁴	36.54 ⁶⁴
17.9	32.279 ²⁶⁴	21.32 ⁴⁶	30.010 ²²⁹	59.62 ²²	13.944 ²¹³	37.18 ⁶³
27.9	32.543 ²⁹³	20.86 ³⁵	30.239 ²⁵²	59.84 ²⁴	14.157 ²³⁶	37.81 ⁶¹
Aug. 6.9	32.836 ³¹⁶	20.51 ²⁵	30.491 ²⁷³	60.08 ²⁴	14.393 ²⁵⁷	38.42 ⁵⁵
16.8	33.152 ³³³	20.26 ¹⁶	30.764 ²⁸⁸	60.32 ²²	14.650 ²⁷¹	38.97 ⁴⁶
26.8	33.485 ³⁴⁶	20.10 ⁷	31.052 ³⁰⁰	60.54 ¹⁸	14.921 ²⁸³	39.43 ³⁵
Sept. 5.8	33.831 ³⁵⁴	20.03 ²	31.352 ³⁰⁸	60.72 ¹³	15.204 ²⁹¹	39.78 ²²
15.8	34.185 ³⁵⁷	20.05 ⁹	31.660 ³¹¹	60.85 ⁷	15.495 ²⁹⁶	40.00 ⁷
25.7	34.542 ³⁵⁷	20.14 ¹⁷	31.971 ³¹²	60.92 ⁰	15.791 ²⁹⁶	40.07 ⁹
Oct. 5.7	34.899 ³⁵²	20.31 ²⁶	32.283 ³⁰⁸	60.92 ⁶	16.087 ²⁹³	39.98 ²³
15.7	35.251 ³⁴²	20.57 ³⁴	32.591 ³⁰¹	60.86 ¹¹	16.380 ²⁸⁷	39.75 ³⁶
25.6	35.593 ³²⁶	20.91 ⁴³	32.892 ²⁸⁸	60.75 ¹³	16.667 ²⁷⁵	39.39 ⁴⁶
Nov. 4.6	35.919 ³⁰⁴	21.34 ⁵⁴	33.180 ²⁷¹	60.62 ¹⁵	16.942 ²⁵⁸	38.93 ⁵⁵
14.6	36.223 ²⁷⁵	21.88 ⁶⁴	33.451 ²⁴⁵	60.47 ¹³	17.200 ²³⁵	38.38 ⁶⁰
24.6	36.498 ²³⁹	22.52 ⁷⁵	33.696 ²¹⁶	60.34 ⁹	17.435 ²⁰⁷	37.78 ⁶⁰
Dec. 4.5	36.737 ¹⁹⁶	23.27 ⁸⁴	33.912 ¹⁷⁸	60.25 ³	17.642 ¹⁷¹	37.18 ⁵⁶
14.5	36.933 ¹⁴⁵	24.11 ⁹²	34.090 ¹³⁵	60.22 ³	17.813 ¹³¹	36.62 ⁵¹
24.5	37.078 ⁹¹	25.03 ⁹⁸	34.225 ⁸⁸	60.25 ¹¹	17.944 ⁸⁵	36.11 ⁴⁴
34.5	37.169	26.01	34.313	60.36	18.029	35.67
Mean Place	32.327	31.41	30.038	67.51	13.996	43.76
Sec δ , Tan δ	1.256	+0.759	1.089	+0.430	1.034	+0.264
L α , L δ	+0.02	0.0	+0.01	0.0	+0.01	0.0
ω α , ω δ	0.00	+1.0	0.00	+1.0	0.00	+1.0
AUTHORITY	A. E.		A. E.		A. E.	

APPARENT PLACES OF STARS, 1924. 317

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	η Geminorum. Mag. 3·2-4·2		ζ Canis Majoris. Mag. 3·1		μ Geminorum. Mag. 3·2	
	R. A.	Dec. N.	R. A.	Dec. S.	R. A.	Dec. N.
	^h 6	^m 10	^h 6	^m 17	^h 6	^m 18
	^s 22	[°] 31	^s 30	[°] 1	^s 22	[°] 33
Jan. 0·5	18·399	64	24·911	25	22·739	73
10·5	18·463	13	24·936	28	22·812	21
20·4	18·476	38	24·908	78	22·833	30
30·4	18·438	85	24·830	125	22·803	79
Feb. 9·4	18·353	127	24·705	165	22·724	121
19·3	18·226	160	24·540	197	22·603	155
29·3	18·066	183	24·343	221	22·448	181
Mar. 10·3	17·883	196	24·122	233	22·267	194
20·3	17·687	196	23·889	234	22·073	196
30·2	17·491	185	23·655	226	21·877	187
Apr. 9·2	17·306	165	23·429	207	21·690	167
19·2	17·141	136	23·222	181	21·523	140
29·2	17·005	99	23·041	148	21·383	104
May 9·1	16·906	58	22·893	109	21·279	64
19·1	16·848	15	22·784	68	21·215	22
29·1	16·833	29	22·716	24	21·193	22
June 8·0	16·862	73	22·692	21	21·215	66
18·0	16·935	115	22·713	64	21·281	107
28·0	17·050	153	22·777	106	21·388	146
July 8·0	17·203	188	22·883	145	21·534	180
17·9	17·391	218	23·028	180	21·714	211
27·9	17·609	243	23·208	213	21·925	238
Aug. 6·9	17·852	265	23·421	240	22·163	259
16·9	18·117	281	23·661	262	22·422	278
26·8	18·398	295	23·923	282	22·700	291
Sept. 5·8	18·693	303	24·205	295	22·991	302
15·8	18·996	309	24·500	304	23·293	309
25·7	19·305	311	24·804	307	23·602	312
Oct. 5·7	19·616	310	25·111	304	23·914	312
15·7	19·926	304	25·415	296	24·226	307
25·7	20·230	293	25·711	281	24·533	297
Nov. 4·6	20·523	276	25·992	260	24·830	282
14·6	20·799	253	26·252	232	25·112	261
24·6	21·052	224	26·484	196	25·373	231
Dec. 4·6	21·276	188	26·680	156	25·604	196
14·5	21·464	145	26·836	109	25·800	154
24·5	21·609	98	26·945	58	25·954	107
34·5	21·707		27·003		26·061	
Mean Place	17·457	48·63	23·643	44·75	21·801	14·40
Sec δ, Tan δ	1·083	+0·415	1·155	-0·578	1·083	+0·415
L α, L δ	+0·01	0·0	-0·02	0·0	+0·01	0·0
ω α, ω δ	0·00	+1·0	0·00	+1·0	0·00	+1·0
AUTHORITY	A. E.		A. E.		A. E.	

318 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	β Canis Majoris. Mag. 2.0		α Argus. Mag. -0.9		ν Geminorum. Mag. 4.1	
	R. A.	Dec. S.	R. A.	Dec. S.	R. A.	Dec. N.
	h m 6 19	° ' 17 54	h m 6 22	° ' 52 39	h m 6 24	° ' 20 15
Jan.	0.5 22.216 ⁴² 10.5 22.258 ⁶ 20.4 22.252 ⁵⁴ 30.4 22.198 ⁹⁸	71.72 ²²⁷ 73.99 ²⁰⁸ 76.07 ¹⁸⁴ 77.91 ¹⁵⁶	18.017 ²¹ 17.996 ⁹³ 17.903 ¹⁶¹ 17.742 ²²²	23.81 ³⁴⁰ 27.21 ³¹⁸ 30.39 ²⁸⁷ 33.26 ²⁴⁸	27.968 ⁷⁸ 28.046 ²⁷ 28.073 ²⁵ 28.048 ⁷³	32.30 ¹⁰ 32.20 ¹ 32.19 ⁶ 32.25 ¹⁴
Feb.	9.4 22.100 ¹³⁷ 19.4 21.963 ¹⁶⁹ 29.3 21.794 ¹⁹⁰	79.47 ¹²⁵ 80.72 ⁹³ 81.65 ⁵⁹	17.520 ²⁷⁴ 17.246 ³¹⁷ 16.929 ³⁴⁵	35.74 ²⁰⁴ 37.78 ¹⁵⁷ 39.35 ¹⁰⁵	27.975 ¹¹⁵ 27.860 ¹⁵¹ 27.709 ¹⁷⁶	32.39 ¹⁷ 32.56 ¹⁸ 32.74 ¹⁷
Mar.	10.3 21.604 ²⁰³ 20.3 21.401 ²⁰⁴ 30.2 21.197 ¹⁹⁶	82.24 ²⁵ 82.49 ⁹ 82.40 ⁴²	16.584 ³⁶² 16.222 ³⁶⁶ 15.856 ³⁵⁶	40.40 ⁵³ 40.93 ⁰ 40.93 ⁵¹	27.533 ¹⁹⁰ 27.343 ¹⁹⁴ 27.149 ¹⁸⁵	32.91 ¹⁵ 33.06 ¹³ 33.19 ⁹
Apr.	9.2 21.001 ¹⁸⁰ 19.2 20.821 ¹⁵⁴ 29.2 20.667 ¹²³	81.98 ⁷⁵ 81.23 ¹⁰⁴ 80.19 ¹³³	15.500 ³³⁵ 15.165 ³⁰⁴ 14.861 ²⁶¹	40.42 ¹⁰² 39.40 ¹⁴⁹ 37.91 ¹⁹⁴	26.964 ¹⁶⁷ 26.797 ¹⁴¹ 26.656 ¹⁰⁷	33.28 ⁶ 33.34 ⁴ 33.38 ⁴
May	9.1 20.544 ⁸⁶ 19.1 20.458 ⁴⁷ 29.1 20.411 ⁷	78.86 ¹⁶⁰ 77.26 ¹⁸² 75.44 ²⁰²	14.600 ²¹⁴ 14.386 ¹⁵⁹ 14.227 ¹⁰¹	35.97 ²³³ 33.64 ²⁶⁸ 30.96 ²⁹⁵	26.549 ⁶⁸ 26.481 ²⁶ 26.455 ¹⁷	33.42 ⁵ 33.47 ⁷ 33.54 ¹⁰
June	8.1 20.404 ³⁵ 18.0 20.439 ⁷⁴ 28.0 20.513 ¹¹²	73.42 ²¹⁶ 71.26 ²²⁴ 69.02 ²²⁸	14.126 ⁴¹ 14.085 ²¹ 14.106 ⁸¹	28.01 ³¹⁶ 24.85 ³²⁹ 21.56 ³³²	26.472 ⁵⁸ 26.530 ¹⁰⁰ 26.630 ¹³⁷	33.64 ¹⁵ 33.79 ¹⁸ 33.97 ²¹
July	8.0 20.625 ¹⁴⁷ 17.9 20.772 ¹⁷⁹ 27.9 20.951 ²⁰⁶	66.74 ²²⁴ 64.50 ²¹⁴ 62.36 ¹⁹⁷	14.187 ¹³⁹ 14.326 ¹⁹⁵ 14.521 ²⁴⁶	18.24 ³²⁷ 14.97 ³¹³ 11.84 ²⁸⁸	26.767 ¹⁷² 26.939 ²⁰³ 27.142 ²²⁸	34.18 ²⁴ 34.42 ²⁶ 34.68 ²⁴
Aug.	6.9 21.157 ²²⁹ 16.9 21.386 ²⁵⁰ 26.8 21.636 ²⁶⁵	60.39 ¹⁷³ 58.66 ¹⁴² 57.24 ¹⁰⁶	14.767 ²⁹⁰ 15.057 ³³⁰ 15.387 ³⁶²	8.96 ²⁵³ 6.43 ²¹¹ 4.32 ¹⁶¹	27.370 ²⁵⁰ 27.620 ²⁷⁰ 27.890 ²⁸³	34.92 ²² 35.14 ¹⁶ 35.30 ⁹
Sept.	5.8 21.901 ²⁷⁸ 15.8 22.179 ²⁸⁵ 25.8 22.464 ²⁸⁸	55.53 ²¹ 55.32 ²⁴ 56.18 ⁶⁵	16.134 ⁴⁰⁰ 16.534 ⁴⁰⁶ 15.749 ³⁸⁵	1.67 ⁴² 1.25 ²² 2.71 ¹⁰⁴	28.468 ³⁰³ 28.771 ³⁰⁷ 28.173 ²⁹⁵	35.40 ¹⁰ 35.30 ¹⁸ 35.39 ¹
Oct.	5.7 22.752 ²⁸⁷ 15.7 23.039 ²⁸¹ 25.7 23.320 ²⁷⁰	55.56 ⁷⁰ 56.26 ¹¹³ 57.39 ¹⁵³	16.940 ⁴⁰² 17.342 ³⁸⁷ 17.729 ³⁶²	1.47 ⁸⁶ 2.33 ¹⁴⁸ 3.81 ²⁰⁵	29.078 ³⁰⁸ 29.386 ³⁰⁴ 29.690 ²⁹⁶	35.12 ²⁸ 34.84 ³⁶ 34.48 ⁴⁰
Nov.	4.6 23.590 ²⁵² 14.6 23.842 ²²⁸ 24.6 24.070 ¹⁹⁸	58.92 ¹⁸⁵ 60.77 ²¹² 62.89 ²³⁰	18.091 ³²⁶ 18.417 ²⁸⁰ 18.697 ²²⁶	5.86 ²⁵⁵ 8.41 ²⁹⁵ 11.36 ³²⁶	29.986 ²⁸² 30.268 ²⁶¹ 30.529 ²³³	34.08 ⁴⁴ 33.64 ⁴² 33.22 ³⁹
Dec.	4.6 24.268 ¹⁶¹ 14.5 24.429 ¹²⁰ 24.5 24.549 ⁷⁴ 34.5 24.623	65.19 ²³⁹ 67.58 ²⁴⁰ 69.98 ²³² 72.30	18.923 ¹⁶⁴ 19.087 ⁹⁵ 19.182 ²⁵ 19.207	14.62 ³⁴⁵ 18.07 ³⁵¹ 21.58 ³⁴⁶ 25.04	30.762 ²⁰⁰ 30.962 ¹⁵⁷ 31.119 ¹¹¹ 31.230	32.83 ³² 32.51 ²⁵ 32.26 ¹⁴ 32.12
Mean Place	21.146	61.39	15.889	13.55	27.045	41.83
Sec δ , Tan δ	1.051	-0.323	1.648	-1.310	1.066	+0.369
L α , L δ	-0.01	0.0	-0.03	0.0	+0.01	0.0
ω α , ω δ	0.00	+1.0	-0.01	+1.0	0.00	+1.0
AUTHORITY	A. E.		A. E.		A. E.	

APPARENT PLACES OF STARS, 1924. 319

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	γ Geminorum. Mag. 1·9		ν Argūs. Mag. 3·2		ε Geminorum. Mag. 3·2	
	R. A.	Dec. N.	R. A.	Dec. S.	R. A.	Dec. N.
	^h 6 ^m 33 ^s	[°] 16 ['] 27	^h 6 ^m 35 ^s	[°] 43 ['] 7	^h 6 ^m 39 ^s	[°] 25 ['] 12
Jan. 0·5	20·236 ₈₄	45·84 ₃₇	27·931 ₂₃	52·54 ₃₂₆	16·372 ₉₆	18·33 ₁₇
10·5	20·320 ₃₄	45·47 ₂₅	27·954 ₃₉	55·80 ₃₀₇	16·468 ₄₄	18·50 ₂₇
20·4	20·354 ₁₆	45·22 ₁₅	27·915 ₉₈	58·87 ₂₇₉	16·512 ₁₁	18·77 ₃₅
30·4	20·338 ₆₅	45·07 ₅	27·817 ₁₅₃	61·66 ₂₄₄	16·501 ₆₂	19·12 ₄₀
Feb. 9·4	20·273 ₁₀₇	45·02 ₂	27·664 ₂₀₁	64·10 ₂₀₃	16·439 ₁₀₈	19·52 ₄₁
19·4	20·166 ₁₄₂	45·04 ₈	27·463 ₂₄₀	66·13 ₁₆₀	16·331 ₁₄₇	19·93 ₄₀
29·3	20·024 ₁₆₉	45·12 ₁₁	27·223 ₂₆₉	67·73 ₁₁₂	16·184 ₁₇₅	20·33 ₃₅
Mar. 10·3	19·855 ₁₈₄	45·23 ₁₃	26·954 ₂₈₆	68·85 ₆₃	16·009 ₁₉₄	20·68 ₂₈
20·3	19·671 ₁₈₉	45·36 ₁₅	26·668 ₂₉₁	69·48 ₁₃	15·815 ₁₉₉	20·96 ₂₀
30·2	19·482 ₁₈₂	45·51 ₁₅	26·377 ₂₈₆	69·61 ₃₅	15·616 ₁₉₃	21·16 ₁₂
Apr. 9·2	19·300 ₁₆₇	45·66 ₁₆	26·091 ₂₆₉	69·26 ₈₂	15·423 ₁₇₈	21·28 ₄
19·2	19·133 ₁₄₁	45·82 ₁₇	25·822 ₂₄₄	68·44 ₁₂₈	15·245 ₁₅₃	21·32 ₄
29·2	18·992 ₁₁₀	45·99 ₁₉	25·578 ₂₀₉	67·16 ₁₇₁	15·092 ₁₂₀	21·28 ₁₀
May 9·1	18·882 ₇₃	46·18 ₂₂	25·369 ₁₇₀	65·45 ₂₀₈	14·972 ₈₁	21·18 ₁₄
19·1	18·809 ₃₄	46·40 ₂₆	25·199 ₁₂₄	63·37 ₂₄₃	14·891 ₄₀	21·04 ₁₆
29·1	18·775 ₈	46·66 ₃₀	25·075 ₇₅	60·94 ₂₇₀	14·851 ₃	20·88 ₁₇
June 8·1	18·783 ₄₉	46·96 ₃₅	25·000 ₂₆	58·24 ₂₉₁	14·854 ₄₇	20·71 ₁₆
18·0	18·832 ₈₈	47·31 ₃₈	24·974 ₂₅	55·33 ₃₀₆	14·901 ₈₈	20·55 ₁₄
28·0	18·920 ₁₂₅	47·69 ₄₁	24·999 ₇₄	52·27 ₃₁₂	14·989 ₁₂₈	20·41 ₁₃
July 8·0	19·045 ₁₆₀	48·10 ₄₂	25·073 ₁₂₁	49·15 ₃₀₉	15·117 ₁₆₄	20·28 ₁₀
17·9	19·205 ₁₈₉	48·52 ₄₁	25·194 ₁₆₇	46·06 ₂₉₇	15·281 ₁₉₆	20·18 ₉
27·9	19·394 ₂₁₆	48·93 ₃₉	25·361 ₂₀₉	43·09 ₂₇₅	15·477 ₂₂₅	20·09 ₉
Aug. 6·9	19·610 ₂₃₉	49·32 ₃₃	25·570 ₂₄₅	40·34 ₂₄₆	15·702 ₂₅₀	20·00 ₉
16·9	19·849 ₂₅₈	49·65 ₂₅	25·815 ₂₇₉	37·88 ₂₀₆	15·952 ₂₇₀	19·91 ₁₂
26·8	20·107 ₂₇₃	49·90 ₁₅	26·094 ₃₀₅	35·82 ₁₆₀	16·222 ₂₈₇	19·79 ₁₅
Sept. 5·8	20·380 ₂₈₆	50·05 ₂	26·399 ₃₂₇	34·22 ₁₀₈	16·509 ₃₀₂	19·64 ₂₀
15·8	20·666 ₂₉₅	50·07 ₁₁	26·726 ₃₄₁	33·14 ₄₉	16·811 ₃₁₁	19·44 ₂₄
25·8	20·961 ₃₀₀	49·96 ₂₄	27·067 ₃₅₀	32·65 ₁₁	17·122 ₃₁₈	19·20 ₂₉
Oct. 5·7	21·261 ₃₀₂	49·72 ₃₈	27·417 ₃₅₀	32·76 ₇₃	17·440 ₃₂₂	18·91 ₃₃
15·7	21·563 ₃₀₁	49·34 ₄₉	27·767 ₃₄₂	33·49 ₁₃₂	17·762 ₃₂₀	18·58 ₃₆
25·7	21·864 ₂₉₃	48·85 ₅₈	28·109 ₃₂₆	34·81 ₁₈₇	18·082 ₃₁₄	18·22 ₃₆
Nov. 4·6	22·157 ₂₈₀	48·27 ₆₄	28·435 ₃₀₁	36·68 ₂₃₆	18·396 ₃₀₁	17·86 ₃₃
14·6	22·437 ₂₆₁	47·63 ₆₅	28·736 ₂₆₈	39·04 ₂₇₇	18·697 ₂₈₂	17·53 ₂₈
24·6	22·698 ₂₃₅	46·98 ₆₅	29·004 ₂₂₆	41·81 ₃₀₆	18·979 ₂₅₅	17·25 ₂₀
Dec. 4·6	22·933 ₂₀₂	46·33 ₅₉	29·230 ₁₇₇	44·87 ₃₂₆	19·234 ₂₂₀	17·05 ₁₀
14·5	23·135 ₁₆₃	45·74 ₅₁	29·407 ₁₂₁	48·13 ₃₃₅	19·454 ₁₇₉	16·95 ₀
24·5	23·298 ₁₁₇	45·23 ₄₁	29·528 ₆₃	51·48 ₃₃₁	19·633 ₁₃₀	16·95 ₁₂
34·5	23·415	44·82	29·591	54·79	19·763	17·07
Mean Place	19·332	55·52	26·240	43·25	15·438	28·04
Sec δ, Tan δ	1·043	+0·296	1·370	-0·937	1·105	+0·471
L α, L δ	+0·01	-0·1	-0·02	-0·1	+0·01	-0·1
ω α, ω δ	0·00	+1·0	-0·01	+1·0	+0·01	+1·0
AUTHORITY	A. E.		A. E.		A. E.	

320 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	ξ Geminorum. Mag. 3·4		α Canis Majoris. Mag. — 1·6		α Pictoris. Mag. 3·3	
	R. A.	Dec. N.	R. A.	Dec. S.	R. A.	Dec. S.
	^h 6	^m 41	^h 6	^m 41	^h 6	^m 47
		[°] 12 58		[°] 16 36		[°] 61 51
Jan. 0·5	2·369 ^s 89	34·11 61	48·884 ^s 60	50·16 ^s 231	27·81 ^s 1	42·80 ^s 360
10·5	2·458 40	33·50 48	48·944 12	52·47 ^s 213	27·80 11	46·40 343
20·4	2·498 11	33·02 35	48·956 37	54·60 ^s 190	27·69 19	49·83 318
30·4	2·487 58	32·67 23	48·919 83	56·50 ^s 164	27·50 27	53·01 283
Feb. 9·4	2·429 101	32·44 13	48·836 124	58·14 ^s 134	27·23 35	55·84 242
19·4	2·328 137	32·31 4	48·712 158	59·48 ^s 101	26·88 40	58·26 195
29·3	2·191 163	32·27 4	48·554 182	60·49 ^s 69	26·48 44	60·21 146
Mar. 10·3	2·028 180	32·31 9	48·372 197	61·18 ^s 36	26·04 48	61·67 93
20·3	1·848 186	32·40 14	48·175 202	61·54 ^s 4	25·56 48	62·60 39
30·2	1·662 181	32·54 19	47·973 197	61·58 ^s 29	25·08 48	62·99 15
Apr. 9·2	1·481 167	32·73 23	47·776 183	61·29 ^s 60	24·60 47	62·84 66
19·2	1·314 143	32·96 27	47·593 160	60·69 ^s 90	24·13 43	62·18 118
29·2	1·171 113	33·23 31	47·433 131	59·79 ^s 117	23·70 39	61·00 167
May 9·1	1·058 79	33·54 37	47·302 97	58·62 ^s 143	23·31 33	59·33 210
19·1	0·979 40	33·91 42	47·205 60	57·19 ^s 165	22·98 27	57·23 250
29·1	0·939 0	34·33 47	47·145 21	55·54 ^s 184	22·71 21	54·73 283
June 8·1	0·939 40	34·80 52	47·124 20	53·70 ^s 198	22·50 14	51·90 309
18·0	0·979 78	35·32 56	47·144 58	51·72 ^s 209	22·36 5	48·81 327
28·0	1·057 115	35·88 59	47·202 95	49·63 ^s 212	22·31 2	45·54 337
July 8·0	1·172 149	36·47 59	47·297 130	47·51 ^s 210	22·33 9	42·17 338
17·9	1·321 178	37·06 57	47·427 162	45·41 ^s 201	22·42 17	38·79 328
27·9	1·499 206	37·63 53	47·589 191	43·40 ^s 186	22·59 25	35·51 308
Aug. 6·9	1·705 228	38·16 44	47·780 215	41·54 ^s 163	22·84 31	32·43 278
16·9	1·933 248	38·60 34	47·995 237	39·91 ^s 135	23·15 36	29·65 240
26·8	2·181 265	38·94 22	48·232 255	38·56 ^s 101	23·51 42	27·25 192
Sept. 5·8	2·446 277	39·16 5	48·487 270	37·55 ^s 61	23·93 45	25·33 136
15·8	2·723 288	39·21 11	48·757 280	36·94 ^s 19	24·38 49	23·97 75
25·8	3·011 294	39·10 29	49·037 286	36·75 ^s 25	24·87 50	23·22 10
Oct. 5·7	3·305 298	38·81 45	49·323 288	37·00 ^s 70	25·37 51	23·12 55
15·7	3·603 296	38·36 61	49·611 286	37·70 ^s 113	25·88 49	23·67 120
25·7	3·899 292	37·75 72	49·897 277	38·83 ^s 151	26·37 47	24·87 183
Nov. 4·6	4·191 279	37·03 81	50·174 262	40·34 ^s 186	26·84 42	26·70 238
14·6	4·470 261	36·22 86	50·436 241	42·20 ^s 212	27·26 37	29·08 285
24·6	4·731 237	35·36 87	50·677 213	44·32 ^s 231	27·63 30	31·93 322
Dec. 4·6	4·968 204	34·49 83	50·890 179	46·63 ^s 241	27·93 22	35·15 347
14·5	5·172 166	33·66 76	51·069 137	49·04 ^s 243	28·15 14	38·62 362
24·5	5·338 121	32·90 66	51·206 93	51·47 ^s 236	28·29 4	42·24 363
34·5	5·459	32·24	51·299	53·83 ^s	28·33	45·87
Mean Place	1·474	43·82	47·937	39·19	24·80	35·04
Sec δ, Tan δ	1·026	+0·230	1·044	—0·298	2·120	—1·870
L α, L δ	+0·01	—0·1	—0·01	—0·1	—0·05	—0·1
ω α, ω δ	0·00	+1·0	0·00	+1·0	—0·03	+1·0
AUTHORITY	A. E.		A. E.		A. E.	

APPARENT PLACES OF STARS, 1924. 321

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	τ Argus. Mag. 2.8		θ Canis Majoris. Mag. 4.3		ϵ Canis Majoris. Mag. 1.6	
	R. A.	Dec. S.	R. A.	Dec. S.	R. A.	Dec. S.
	^h 6 ^m 48	[°] 50 ['] 31	^h 6 ^m 50	[°] 11 ['] 56	^h 6 ^m 55	[°] 28 ['] 51
Jan. 0.5	5.077 ^s ₂₅	33.48 ₃₄₇	40.582 ^s ₇₉	41.05 ₂₀₇	39.612 ^s ₆₈	71.96 ₂₈₇
10.5	5.102 ₄₆	36.95 ₃₃₀	40.661 ₃₀	43.12 ₁₉₂	39.680 ₁₅	74.83 ₂₇₁
20.5	5.056 ₁₁₄	40.25 ₃₀₄	40.691 ₁₉	45.04 ₁₇₁	39.695 ₃₈	77.54 ₂₄₇
30.4	4.942 ₁₇₆	43.29 ₂₇₀	40.672 ₆₅	46.75 ₁₄₆	39.657 ₈₉	80.01 ₂₁₈
Feb. 9.4	4.766 ₂₃₂	45.99 ₂₃₀	40.607 ₁₀₇	48.21 ₁₂₀	39.568 ₁₃₃	82.19 ₁₈₃
19.4	4.534 ₂₇₇	48.29 ₁₈₄	40.500 ₁₄₂	49.41 ₉₁	39.435 ₁₇₁	84.02 ₁₄₆
29.3	4.257 ₃₁₁	50.13 ₁₃₇	40.358 ₁₇₀	50.32 ₆₃	39.264 ₂₀₀	85.48 ₁₀₇
Mar. 10.3	3.946 ₃₃₃	51.50 ₈₆	40.188 ₁₈₆	50.95 ₃₄	39.064 ₂₁₈	86.55 ₆₆
20.3	3.613 ₃₄₂	52.36 ₃₄	40.002 ₁₉₂	51.29 ₅	38.846 ₂₂₇	87.21 ₂₄
30.3	3.271 ₃₄₀	52.70 ₁₈	39.810 ₁₉₀	51.34 ₂₄	38.619 ₂₂₅	87.45 ₁₇
Apr. 9.2	2.931 ₃₂₄	52.52 ₆₇	39.620 ₁₇₈	51.10 ₅₁	38.394 ₂₁₃	87.28 ₅₇
19.2	2.607 ₂₉₉	51.85 ₁₁₆	39.442 ₁₅₇	50.59 ₇₇	38.181 ₁₉₃	86.71 ₉₆
29.2	2.308 ₂₆₄	50.69 ₁₆₂	39.285 ₁₃₁	49.82 ₁₀₂	37.988 ₁₆₆	85.75 ₁₃₂
May 9.2	2.044 ₂₂₃	49.07 ₂₀₄	39.154 ₉₈	48.80 ₁₂₅	37.822 ₁₃₃	84.43 ₁₆₆
19.1	1.821 ₁₇₄	47.03 ₂₄₁	39.056 ₆₃	47.55 ₁₄₆	37.689 ₉₅	82.77 ₁₉₆
29.1	1.647 ₁₂₂	44.62 ₂₇₃	38.993 ₂₅	46.09 ₁₆₃	37.594 ₅₆	80.81 ₂₂₁
June 8.1	1.525 ₆₇	41.89 ₂₉₈	38.968 ₁₃	44.46 ₁₇₇	37.538 ₁₅	78.60 ₂₄₂
18.0	1.458 ₁₀	38.91 ₃₁₅	38.981 ₅₁	42.69 ₁₈₇	37.523 ₂₇	76.18 ₂₅₅
28.0	1.448 ₄₇	35.76 ₃₂₃	39.032 ₈₇	40.82 ₁₉₃	37.550 ₆₇	73.63 ₂₆₃
July 8.0	1.495 ₁₀₂	32.53 ₃₂₃	39.119 ₁₂₁	38.89 ₁₉₀	37.617 ₁₀₆	71.00 ₂₆₃
18.0	1.597 ₁₅₆	29.30 ₃₁₄	39.240 ₁₅₁	36.99 ₁₈₃	37.723 ₁₄₂	68.37 ₂₅₄
27.9	1.753 ₂₀₆	26.16 ₂₉₄	39.391 ₁₈₁	35.16 ₁₇₂	37.865 ₁₇₆	65.83 ₂₃₉
Aug. 6.9	1.959 ₂₅₂	23.22 ₂₆₅	39.572 ₂₀₆	33.44 ₁₅₂	38.041 ₂₀₇	63.44 ₂₁₅
16.9	2.211 ₂₉₃	20.57 ₂₂₆	39.778 ₂₂₇	31.92 ₁₂₆	38.248 ₂₃₅	61.29 ₁₈₂
26.8	2.504 ₃₂₈	18.31 ₁₈₀	40.005 ₂₄₇	30.66 ₉₇	38.483 ₂₅₈	59.47 ₁₄₄
Sept. 5.8	2.832 ₃₅₆	16.51 ₁₂₆	40.252 ₂₆₂	29.69 ₆₀	38.741 ₂₇₇	58.03 ₉₈
15.8	3.188 ₃₇₈	15.25 ₆₇	40.514 ₂₇₅	29.09 ₂₄	39.018 ₂₉₂	57.05 ₄₉
25.8	3.566 ₃₈₉	14.58 ₄	40.789 ₂₈₃	28.85 ₁₉	39.310 ₃₀₄	56.56 ₅
Oct. 5.7	3.955 ₃₉₃	14.54 ₆₀	41.072 ₂₈₇	29.04 ₅₉	39.614 ₃₀₈	56.61 ₅₈
15.7	4.348 ₃₈₆	15.14 ₁₂₃	41.359 ₂₈₇	29.63 ₉₈	39.922 ₃₀₇	57.19 ₁₁₀
25.7	4.734 ₃₆₉	16.37 ₁₈₂	41.646 ₂₈₂	30.61 ₁₃₅	40.229 ₃₀₁	58.29 ₁₅₉
Nov. 4.7	5.103 ₃₄₂	18.19 ₂₃₅	41.928 ₂₆₉	31.96 ₁₆₅	40.530 ₂₈₅	59.88 ₂₀₃
14.6	5.445 ₃₀₄	20.54 ₂₈₀	42.197 ₂₅₁	33.61 ₁₉₀	40.815 ₂₆₃	61.91 ₂₃₉
24.6	5.749 ₂₅₆	23.34 ₃₁₄	42.448 ₂₂₆	35.51 ₂₀₇	41.078 ₂₃₃	64.30 ₂₆₇
Dec. 4.6	6.005 ₂₀₀	26.48 ₃₃₈	42.674 ₁₉₃	37.58 ₂₁₆	41.311 ₁₉₆	66.97 ₂₈₄
14.5	6.205 ₁₃₇	29.86 ₃₅₀	42.867 ₁₅₅	39.74 ₂₁₉	41.507 ₁₅₁	69.81 ₂₉₃
24.5	6.342 ₆₈	33.36 ₃₅₁	43.022 ₁₁₀	41.93 ₂₁₂	41.658 ₁₀₂	72.74 ₂₉₀
34.5	6.410	36.87	43.132	44.05	41.760	75.64
Mean Place	3.001	25.42	39.563	31.96	38.319	63.73
Sec δ , Tan δ	1.573	-1.214	1.022	-0.212	1.142	-0.551
L α , L δ	-0.03	-0.1	-0.01	-0.1	-0.01	-0.1
ω α , ω δ	-0.02	+1.0	0.00	+1.0	-0.01	+1.0

AUTHORITY

A. N.

A. E.

A. E.

322 APPARENT PLACES OF STARS, 1924

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	22 Canis Majoris. Mag. 3·7		ζ Geminorum. Mag. 3·7-4·3		σ ² Canis Majoris. Mag. 3·1	
	R. A.	Dec. S.	R. A.	Dec. N.	R. A.	Dec. S.
	^h 6 ^m 58	[°] 27 ['] 49	^h 6 ^m 59	[°] 20 ['] 40	^h 6 ^m 59	[°] 23 ['] 43
Jan.	0·5 42·754 ⁷³	38·12 ²⁸³	37·055 ¹¹⁴	49·09 ¹⁶	52·241 ⁷⁹	25·05 ²⁶⁷
	10·5 42·827 ¹⁹	40·95 ²⁶⁸	37·169 ⁶³	48·93 ⁴	52·320 ²⁶	27·72 ²⁵⁰
	20·5 42·846 ³³	43·63 ²⁴⁵	37·232 ⁹	48·89 ⁹	52·346 ²⁵	30·22 ²²⁸
	30·4 42·813 ⁸³	46·08 ²¹⁵	37·241 ⁴²	48·98 ¹⁸	52·321 ⁷⁴	32·50 ²⁰¹
Feb.	9·4 42·730 ¹²⁹	48·23 ¹⁸²	37·199 ⁸⁹	49·16 ²⁴	52·247 ¹¹⁹	34·51 ¹⁶⁹
	19·4 42·601 ¹⁶⁶	50·05 ¹⁴⁶	37·110 ¹²⁹	49·40 ²⁹	52·128 ¹⁵⁶	36·20 ¹³⁴
	29·4 42·435 ¹⁹⁶	51·51 ¹⁰⁶	36·981 ¹⁶⁰	49·69 ³¹	51·972 ¹⁸⁴	37·54 ⁹⁸
Mar.	10·3 42·239 ²¹⁵	52·57 ⁶⁷	36·821 ¹⁸⁰	50·00 ²⁹	51·788 ²⁰³	38·52 ⁶⁰
	20·3 42·024 ²²³	53·24 ²⁵	36·641 ¹⁹⁰	50·29 ²⁶	51·585 ²¹³	39·12 ²²
	30·3 41·801 ²²²	53·49 ¹⁴	36·451 ¹⁸⁸	50·55 ²³	51·372 ²¹¹	39·34 ¹⁵
Apr.	9·2 41·579 ²¹⁰	53·35 ⁵⁴	36·263 ¹⁷⁶	50·78 ¹⁸	51·161 ²⁰⁰	39·19 ⁵²
	19·2 41·369 ¹⁹²	52·81 ⁹²	36·087 ¹⁵⁵	50·96 ¹⁵	50·961 ¹⁸⁰	38·67 ⁸⁷
	29·2 41·177 ¹⁶⁴	51·89 ¹²⁸	35·932 ¹²⁶	51·11 ¹¹	50·781 ¹⁵⁵	37·80 ¹²⁰
May	9·2 41·013 ¹³¹	50·61 ¹⁶¹	35·806 ⁹³	51·22 ⁸	50·626 ¹²³	36·60 ¹⁵²
	19·1 40·882 ⁹⁵	49·00 ¹⁹¹	35·713 ⁵⁴	51·30 ⁸	50·503 ⁸⁷	35·08 ¹⁷⁹
	29·1 40·787 ⁵⁷	47·09 ²¹⁶	35·659 ¹⁴	51·38 ⁷	50·416 ⁴⁹	33·29 ²⁰³
June	8·1 40·730 ¹⁵	44·93 ²³⁷	35·645 ²⁶	51·45 ⁸	50·367 ¹⁰	31·26 ²²¹
	18·0 40·715 ²⁵	42·56 ²⁵⁰	35·671 ⁶⁶	51·53 ⁸	50·357 ³⁰	29·05 ²³⁵
	28·0 40·740 ⁶⁵	40·06 ²⁵⁹	35·737 ¹⁰⁴	51·61 ⁸	50·387 ⁶⁸	26·70 ²⁴²
July	8·0 40·805 ¹⁰³	37·47 ²⁵⁸	35·841 ¹³⁹	51·69 ⁹	50·455 ¹⁰⁵	24·28 ²⁴²
	18·0 40·908 ¹⁴⁰	34·89 ²⁵¹	35·980 ¹⁷¹	51·78 ⁷	50·560 ¹³⁹	21·86 ²³⁵
	27·9 41·048 ¹⁷³	32·38 ²³⁶	36·151 ¹⁹⁹	51·85 ⁵	50·699 ¹⁷²	19·51 ²²⁰
Aug.	6·9 41·221 ²⁰³	30·02 ²¹²	36·350 ²²⁶	51·90 ⁰	50·871 ²⁰⁰	17·31 ¹⁹⁸
	16·9 41·424 ²³¹	27·90 ¹⁸⁰	36·576 ²⁴⁷	51·90 ⁷	51·071 ²²⁶	15·33 ¹⁶⁸
	26·9 41·655 ²⁵⁴	26·10 ¹⁴²	36·823 ²⁶⁷	51·83 ¹³	51·297 ²⁴⁸	13·65 ¹³²
Sept.	5·8 41·909 ²⁷⁴	24·68 ⁹⁸	37·090 ²⁸²	51·70 ²⁴	51·545 ²⁶⁸	12·33 ⁸⁹
	15·8 42·183 ²⁸⁹	23·70 ⁴⁹	37·372 ²⁹⁶	51·46 ³²	51·813 ²⁸²	11·44 ⁴³
	25·8 42·472 ³⁰¹	23·21 ⁴	37·668 ³⁰⁶	51·14 ⁴³	52·095 ²⁹⁴	11·01 ⁷
Oct.	5·8 42·773 ³⁰⁷	23·25 ⁵⁶	37·974 ³¹²	50·71 ⁵¹	52·389 ²⁹⁹	11·08 ⁵⁶
	15·7 43·080 ³⁰⁶	23·81 ¹⁰⁹	38·286 ³¹⁴	50·20 ⁵⁸	52·688 ³⁰⁰	11·64 ¹⁰⁶
	25·7 43·386 ²⁹⁹	24·90 ¹⁵⁷	38·600 ³¹²	49·62 ⁶²	52·988 ²⁹⁴	12·70 ¹⁵¹
Nov.	4·7 43·685 ²⁸⁶	26·47 ²⁰⁰	38·912 ³⁰²	49·00 ⁶⁵	53·282 ²⁸²	14·21 ¹⁹²
	14·6 43·971 ²⁶⁵	28·47 ²³⁵	39·214 ²⁸⁷	48·35 ⁶²	53·564 ²⁶²	16·13 ²²⁵
	24·6 44·236 ²³⁶	30·82 ²⁶⁴	39·501 ²⁶³	47·73 ⁵⁶	53·826 ²³⁴	18·38 ²⁵⁰
Dec.	4·6 44·472 ¹⁹⁸	33·46 ²⁸⁰	39·764 ²³²	47·17 ⁴⁷	54·060 ¹⁹⁹	20·88 ²⁶⁶
	14·6 44·670 ¹⁵⁵	36·26 ²⁸⁹	39·996 ¹⁹²	46·70 ³⁶	54·259 ¹⁵⁸	23·54 ²⁷³
	24·5 44·825 ¹⁰⁷	39·15 ²⁸⁷	40·188 ¹⁴⁸	46·34 ²⁴	54·417 ¹¹¹	26·27 ²⁷⁰
	34·5 44·932	42·02	40·336	46·10	54·528	28·97
Mean Place	41·481	30·03	36·170	59·04	51·051	16·84
Sec δ, Tan δ	1·131	-0·528	1·069	+0·378	1·092	-0·439
L α, L δ	-0·01	-0·1	+0·01	-0·1	-0·01	-0·1
ω α, ω δ	-0·01	+1·0	+0·01	+1·0	-0·01	+1·0
AUTHORITY	A. E.				A. N.	

APPARENT PLACES OF STARS, 1924. 323

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	γ Canis Majoris. Mag. 4.1			δ Canis Majoris. Mag. 2.0			ς Geminorum. Mag. 5.3		
	R. A.		Dec. S.	R. A.		Dec. S.	R. A.		Dec. N.
	^h 7	^m 0	[°] 15 ['] 31	^h 7	^m 5	[°] 26 ['] 16	^h 7	^m 9	[°] 16 ['] 17
Jan.	0.5	20.285 ₈₆	20.31 ₂₂₉	19.240 ₈₂	25.45 ₂₈₀	1.415 ₁₂₁	11.35 ₄₇		
	10.5	20.371 ₃₆	22.60 ₂₁₃	19.322 ₂₉	28.25 ₂₆₄	1.536 ₇₀	10.88 ₃₂		
	20.5	20.407 ₁₃	24.73 ₁₉₁	19.351 ₂₄	30.89 ₂₄₂	1.606 ₁₇	10.56 ₁₉		
	30.4	20.394 ₆₁	26.64 ₁₆₇	19.327 ₇₅	33.31 ₂₁₄	1.623 ₃₄	10.37 ₆		
Feb.	9.4	20.333 ₁₀₅	28.31 ₁₃₈	19.252 ₁₁₉	35.45 ₁₈₁	1.589 ₈₀	10.31 ₅		
	19.4	20.228 ₁₄₁	29.69 ₁₀₈	19.133 ₁₅₈	37.26 ₁₄₆	1.509 ₁₂₀	10.36 ₁₄		
	29.4	20.087 ₁₆₉	30.77 ₇₇	18.975 ₁₈₇	38.72 ₁₀₈	1.389 ₁₅₁	10.50 ₁₉		
Mar.	10.3	19.918 ₁₈₇	31.54 ₄₅	18.788 ₂₀₈	39.80 ₆₉	1.238 ₁₇₃	10.69 ₂₂		
	20.3	19.731 ₁₉₆	31.99 ₁₃	18.580 ₂₁₇	40.49 ₂₉	1.065 ₁₈₄	10.91 ₂₅		
	30.3	19.535 ₁₉₅	32.12 ₁₈	18.363 ₂₁₇	40.78 ₁₀	0.881 ₁₈₃	11.16 ₂₆		
Apr.	9.3	19.340 ₁₈₄	31.94 ₄₈	18.146 ₂₀₇	40.68 ₄₈	0.698 ₁₇₃	11.42 ₂₅		
	19.2	19.156 ₁₆₅	31.46 ₇₇	17.939 ₁₈₈	40.20 ₈₆	0.525 ₁₅₅	11.67 ₂₅		
	29.2	18.991 ₁₃₉	30.69 ₁₀₆	17.751 ₁₆₄	39.34 ₁₂₁	0.370 ₁₂₇	11.92 ₂₅		
May	9.2	18.852 ₁₀₉	29.63 ₁₃₀	17.587 ₁₃₁	38.13 ₁₅₃	0.243 ₉₅	12.17 ₂₆		
	19.1	18.743 ₇₄	28.33 ₁₅₄	17.456 ₉₇	36.60 ₁₈₃	0.148 ₆₀	12.43 ₂₈		
	29.1	18.669 ₃₆	26.79 ₁₇₃	17.359 ₅₈	34.77 ₂₀₇	0.088 ₂₂	12.71 ₂₉		
June	8.1	18.633 ₁	25.06 ₁₈₉	17.301 ₁₉	32.70 ₂₂₈	0.066 ₁₇	13.00 ₃₁		
	18.1	18.634 ₃₈	23.17 ₂₀₀	17.282 ₂₁	30.42 ₂₄₂	0.083 ₅₅	13.31 ₃₁		
	28.0	18.672 ₇₅	21.17 ₂₀₆	17.303 ₆₀	28.00 ₂₅₀	0.138 ₉₂	13.62 ₃₃		
July	8.0	18.747 ₁₁₀	19.11 ₂₀₆	17.363 ₉₇	25.50 ₂₅₁	0.230 ₁₂₅	13.95 ₃₁		
	18.0	18.857 ₁₄₂	17.05 ₁₉₉	17.460 ₁₃₄	22.99 ₂₄₅	0.355 ₁₅₈	14.26 ₂₉		
	28.0	18.999 ₁₇₂	15.06 ₁₈₆	17.594 ₁₆₆	20.54 ₂₂₉	0.513 ₁₈₅	14.55 ₂₄		
Aug.	6.9	19.171 ₁₉₈	13.20 ₁₆₆	17.760 ₁₉₆	18.25 ₂₀₈	0.698 ₂₁₁	14.79 ₁₇		
	16.9	19.369 ₂₂₃	11.54 ₁₄₁	17.956 ₂₂₄	16.17 ₁₇₇	0.909 ₂₃₄	14.96 ₇		
	26.9	19.592 ₂₄₂	10.13 ₁₀₈	18.180 ₂₄₈	14.40 ₁₄₁	1.143 ₂₅₃	15.03 ₃		
Sept.	5.8	19.834 ₂₆₀	9.05 ₇₀	18.428 ₂₆₉	12.99 ₉₇	1.396 ₂₇₀	15.00 ₁₆		
	15.8	20.094 ₂₇₅	8.35 ₃₀	18.697 ₂₈₅	12.02 ₅₀	1.666 ₂₈₅	14.84 ₃₁		
	25.8	20.369 ₂₈₄	8.05 ₁₄	18.982 ₂₉₇	11.52 ₂	1.951 ₂₉₆	14.53 ₄₅		
Oct.	5.8	20.653 ₂₉₀	8.19 ₅₇	19.279 ₃₀₄	11.54 ₅₃	2.247 ₃₀₄	14.08 ₅₉		
	15.7	20.943 ₂₉₂	8.76 ₁₀₀	19.583 ₃₀₅	12.07 ₁₀₄	2.551 ₃₀₇	13.49 ₇₀		
	25.7	21.235 ₂₈₇	9.76 ₁₃₉	19.888 ₃₀₀	13.11 ₁₅₂	2.858 ₃₀₇	12.79 ₇₉		
Nov.	4.7	21.522 ₂₇₆	11.15 ₁₇₄	20.188 ₂₈₇	14.63 ₁₉₄	3.165 ₂₉₉	12.00 ₈₅		
	14.7	21.798 ₂₅₉	12.89 ₂₀₁	20.475 ₂₆₈	16.57 ₂₃₀	3.464 ₂₈₅	11.15 ₈₆		
	24.6	22.057 ₂₃₃	14.90 ₂₂₂	20.743 ₂₄₀	18.87 ₂₅₈	3.749 ₂₆₃	10.29 ₈₃		
Dec.	4.6	22.290 ₂₀₁	17.12 ₂₃₃	20.983 ₂₀₅	21.45 ₂₇₅	4.012 ₂₃₄	9.46 ₇₇		
	14.6	22.491 ₁₆₂	19.45 ₂₃₇	21.188 ₁₆₂	24.20 ₂₈₃	4.246 ₁₉₇	8.69 ₆₇		
	24.5	22.653 ₁₁₆	21.82 ₂₃₄	21.350 ₁₁₅	27.03 ₂₈₃	4.443 ₁₅₃	8.02 ₅₃		
	34.5	22.769	24.16	21.465	29.86	4.596	7.49		
Mean Place	19.223	11.76	17.998	17.71	0.552	21.19			
Sec δ , Tan δ	1.038	-0.278	1.115	-0.494	1.042	+0.292			
L α , L δ	-0.01	-0.1	-0.01	-0.1	+0.01	-0.1			
ω α , ω δ	0.00	+1.0	-0.01	+1.0	+0.01	+1.0			
AUTHORITY	A. E.		A. E.		Y 2				

324 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	π Argûs. Mag. 2.7		δ Geminorum. Mag. 3.5		δ Volantis. Mag. 4.0	
	R. A.	Dec. S.	R. A.	Dec. N.	R. A.	Dec. S.
	^h ^m 7 14	[°] ['] 36 57	^h ^m 7 15	[°] ['] 22 7	^h ^m 7 16	[°] ['] 67 48
Jan.	0.5 29.034 81	44.21 321	36.048 133	14.78 12	56.85 2	70.08 371
	10.5 29.115 24	47.42 308	36.181 79	14.66 2	56.87 8	73.79 363
	20.5 29.139 35	50.50 286	36.260 26	14.68 16	56.79 20	77.42 343
	30.4 29.104 90	53.36 258	36.286 28	14.84 26	56.59 30	80.85 315
Feb.	9.4 29.014 139	55.94 222	36.258 76	15.10 35	56.29 40	84.00 280
	19.4 28.875 183	58.16 184	36.182 118	15.45 39	55.89 47	86.80 238
	29.4 28.692 215	60.00 141	36.064 153	15.84 40	55.42 53	89.18 190
Mar.	10.3 28.477 239	61.41 97	35.911 175	16.24 38	54.89 58	91.08 141
	20.3 28.238 251	62.38 51	35.736 188	16.62 35	54.31 60	92.49 88
	30.3 27.987 253	62.89 6	35.548 189	16.97 29	53.71 60	93.37 35
Apr.	9.3 27.734 244	62.95 39	35.359 180	17.26 24	53.11 61	93.72 20
	19.2 27.490 227	62.56 83	35.179 161	17.50 17	52.50 57	93.52 72
	29.2 27.263 202	61.73 125	35.018 136	17.67 11	51.93 54	92.80 123
May	9.2 27.061 170	60.48 164	34.882 103	17.78 7	51.39 48	91.57 171
	19.1 26.891 133	58.84 199	34.779 66	17.85 3	50.91 42	89.86 215
	29.1 26.758 93	56.85 228	34.713 28	17.88 1	50.49 34	87.71 253
June	8.1 26.665 50	54.57 253	34.685 12	17.89 1	50.15 25	85.18 286
	18.1 26.615 7	52.04 273	34.697 52	17.88 3	49.90 17	82.32 310
	28.0 26.608 36	49.31 283	34.749 89	17.85 3	49.73 7	79.22 328
July	8.0 26.644 80	46.48 287	34.838 125	17.82 5	49.66 2	75.94 334
	18.0 26.724 121	43.61 281	34.963 157	17.77 8	49.68 12	72.60 333
	28.0 26.845 159	40.80 267	35.120 188	17.69 11	49.80 21	69.27 320
Aug.	6.9 27.004 197	38.13 243	35.308 214	17.58 15	50.01 30	66.07 298
	16.9 27.201 229	35.70 213	35.522 238	17.43 22	50.31 38	63.09 264
	26.9 27.430 259	33.57 172	35.760 259	17.21 29	50.69 46	60.45 222
Sept.	5.8 27.689 285	31.85 125	36.019 278	16.92 37	51.15 52	58.23 171
	15.8 27.974 305	30.60 73	36.297 293	16.55 46	51.67 57	56.52 113
	25.8 28.279 321	29.87 17	36.590 305	16.09 55	52.24 61	55.39 50
Oct.	5.8 28.600 330	29.70 42	36.895 315	15.54 62	52.85 61	54.89 16
	15.7 28.930 332	30.12 100	37.210 319	14.92 68	53.46 62	55.05 83
	25.7 29.262 327	31.12 155	37.529 320	14.24 70	54.08 59	55.88 147
Nov.	4.7 29.589 313	32.67 205	37.849 313	13.54 71	54.67 55	57.35 207
	14.7 29.902 289	34.72 248	38.162 299	12.83 66	55.22 49	59.42 261
	24.6 30.191 259	37.20 281	38.461 278	12.17 58	55.71 41	62.03 304
Dec.	4.6 30.450 218	40.01 306	38.739 248	11.59 48	56.12 32	65.07 337
	14.6 30.668 172	43.07 320	38.987 211	11.11 35	56.44 21	68.44 360
	24.5 30.840 119	46.27 322	39.198 165	10.76 20	56.65 10	72.04 369
	34.5 30.959	49.49	39.363	10.56	56.75	75.73
Mean Place	27.513	37.73	35.188	24.93	52.81	65.57
Sec δ , Tan δ	1.251	-0.752	1.079	+0.407	2.649	-2.452
L α , L δ	-0.02	-0.1	+0.01	-0.1	-0.06	-0.1
ω α , ω δ	-0.02	+0.9	+0.01	+0.9	-0.05	+0.9
AUTHORITY	A. E.		A. E.		A. E.	

APPARENT PLACES OF STARS, 1924. 325

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date,	η Canis Majoris. Mag. 2.4		β Canis Minoris. Mag. 3.1		σ Argus. Mag. 3.3			
	R. A.	Dec. S.	R. A.	Dec. N.	R. A.	Dec. S.		
	^h 7	^m 21	[°] 29	['] 9	^h 7	^m 26	[°] 43	['] 8
Jan.	0.5	6.627 ⁹⁶	20.46 ²⁹³	2.689 ¹²⁷	27.68 ¹⁰⁰	50.868 ⁹¹	53.71 ³⁴¹	
	10.5	6.723 ⁴³	23.39 ²⁸²	2.816 ⁷⁸	26.68 ⁸⁵	50.959 ²⁸	57.12 ³³⁰	
	20.5	6.766 ¹²	26.21 ²⁶¹	2.894 ²⁷	25.83 ⁶⁸	50.987 ³⁴	60.42 ³¹²	
	30.4	6.754 ⁶⁴	28.82 ²³³	2.921 ²²	25.15 ⁵¹	50.953 ⁹⁶	63.54 ²⁸²	
Feb.	9.4	6.690 ¹¹²	31.15 ²⁰²	2.899 ⁶⁹	24.64 ³⁴	50.857 ¹⁵⁰	66.36 ²⁵⁰	
	19.4	6.578 ¹⁵³	33.17 ¹⁶⁶	2.830 ¹⁰⁹	24.30 ²⁰	50.707 ¹⁹⁷	68.86 ²¹⁰	
	29.4	6.425 ¹⁸⁵	34.83 ¹²⁷	2.721 ¹⁴⁰	24.10 ⁶	50.510 ²³⁴	70.96 ¹⁶⁶	
Mar.	10.3	6.240 ²⁰⁸	36.10 ⁸⁸	2.581 ¹⁶⁴	24.04 ⁶	50.276 ²⁶²	72.62 ¹²¹	
	20.3	6.032 ²²¹	36.98 ⁴⁶	2.417 ¹⁷⁵	24.10 ¹⁵	50.014 ²⁷⁷	73.83 ⁷⁴	
	30.3	5.811 ²²⁴	37.44 ⁶	2.242 ¹⁷⁸	24.25 ²⁵	49.737 ²⁸²	74.57 ²⁴	
Apr.	9.2	5.587 ²¹⁶	37.50 ³⁵	2.064 ¹⁷⁰	24.50 ³³	49.455 ²⁷⁶	74.81 ²³	
	19.2	5.371 ²⁰⁰	37.15 ⁷⁴	1.894 ¹⁵⁵	24.83 ⁴⁰	49.179 ²⁶⁰	74.58 ⁷⁰	
	29.2	5.171 ¹⁷⁷	36.41 ¹¹²	1.739 ¹³¹	25.23 ⁴⁷	48.919 ²³⁶	73.88 ¹¹⁶	
May	9.2	4.994 ¹⁴⁷	35.29 ¹⁴⁶	1.608 ¹⁰²	25.70 ⁵³	48.683 ²⁰⁵	72.72 ¹⁵⁸	
	19.1	4.847 ¹¹⁴	33.83 ¹⁷⁸	1.506 ⁶⁹	26.23 ⁶⁰	48.478 ¹⁶⁷	71.14 ¹⁹⁷	
	29.1	4.733 ⁷⁷	32.05 ²⁰⁶	1.437 ³⁴	26.83 ⁶⁵	48.311 ¹²⁷	69.17 ²³¹	
June	8.1	4.656 ³⁸	29.99 ²²⁸	1.403 ²	27.48 ⁶⁹	48.184 ⁸²	66.86 ²⁶⁰	
	18.1	4.618 ¹	27.71 ²⁴⁵	1.405 ³⁸	28.17 ⁷³	48.102 ³⁶	64.26 ²⁸⁰	
	28.0	4.619 ⁴¹	25.26 ²⁵⁶	1.443 ⁷²	28.90 ⁷⁴	48.066 ¹¹	61.46 ²⁹⁶	
July	8.0	4.660 ⁷⁹	22.70 ²⁵⁹	1.515 ¹⁰⁶	29.64 ⁷³	48.077 ⁵⁸	58.50 ³⁰¹	
	18.0	4.739 ¹¹⁷	20.11 ²⁵⁴	1.621 ¹³⁷	30.37 ⁶⁹	48.135 ¹⁰⁴	55.49 ²⁹⁹	
	28.0	4.856 ¹⁵¹	17.57 ²⁴¹	1.758 ¹⁶⁵	31.06 ⁶¹	48.239 ¹⁴⁸	52.50 ²⁸⁷	
Aug.	6.9	5.007 ¹⁸³	15.16 ²²⁰	1.923 ¹⁹¹	31.67 ⁵¹	48.387 ¹⁹⁰	49.63 ²⁶⁴	
	16.9	5.190 ²¹⁴	12.96 ¹⁹¹	2.114 ²¹⁵	32.18 ³⁷	48.577 ²²⁹	46.99 ²³⁴	
	26.9	5.404 ²⁴⁰	11.05 ¹⁵⁵	2.329 ²³⁵	32.55 ²¹	48.806 ²⁶⁴	44.65 ¹⁹⁴	
Sept.	5.8	5.644 ²⁶⁴	9.50 ¹¹¹	2.564 ²⁵⁴	32.76 ¹	49.070 ²⁹⁴	42.71 ¹⁴⁷	
	15.8	5.908 ²⁸¹	8.39 ⁶³	2.818 ²⁶⁹	32.77 ²⁰	49.364 ³²¹	41.24 ⁹³	
	25.8	6.189 ³⁰²	7.76 ¹¹	3.087 ²⁸³	32.57 ⁴²	49.685 ³⁴¹	40.31 ³⁵	
Oct.	5.8	6.491 ³⁰⁹	7.65 ⁴³	3.370 ²⁹³	32.15 ⁶⁴	50.026 ³⁵³	39.96 ²⁶	
	15.7	6.800 ³¹³	8.08 ⁹⁶	3.663 ²⁹⁸	31.51 ⁸⁴	50.379 ³⁵⁸	40.22 ⁸⁸	
	25.7	7.113 ³¹¹	9.04 ¹⁴⁷	3.961 ²⁹⁹	30.67 ¹⁰²	50.737 ³⁵³	41.10 ¹⁴⁷	
Nov.	4.7	7.424 ³⁰⁰	10.51 ¹⁹²	4.260 ²⁹⁵	29.65 ¹¹⁵	51.090 ³⁴⁰	42.57 ²⁰¹	
	14.7	7.724 ²⁸²	12.43 ²³²	4.555 ²⁸²	28.50 ¹²³	51.430 ³¹⁶	44.58 ²⁴⁸	
	24.6	8.006 ²⁵⁶	14.75 ²⁶²	4.837 ²⁶²	27.27 ¹²⁶	51.746 ²⁸²	47.06 ²⁸⁷	
Dec.	4.6	8.262 ²²⁰	17.37 ²⁸³	5.099 ²³⁶	26.01 ¹²⁵	52.028 ²⁴⁰	49.93 ³¹⁵	
	14.6	8.482 ¹⁷⁹	20.20 ²⁹⁴	5.335 ²⁰⁰	24.76 ¹¹⁸	52.268 ¹⁸⁷	53.08 ³³⁴	
	24.5	8.661 ¹³¹	23.14 ²⁹⁷	5.535 ¹⁵⁸	23.58 ¹⁰⁷	52.455 ¹³¹	56.42 ³⁴¹	
	34.5	8.792	26.11	5.693	22.51	52.586	59.83	
Mean Place	5.321	13.89	1.836	36.98	49.113	48.65		
Sec δ , Tan δ	1.145	-0.558	1.011	+0.148	1.371	-0.937		
L α , L δ	-0.01	-0.1	0.00	-0.1	-0.02	-0.1		
ω α , ω δ	-0.01	+0.9	0.00	+0.9	-0.02	+0.9		
AUTHORITY	A. N.		A. E.					

326 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	α Geminorum. Mag. 2.0		ζ Carinae. Mag. 4.9		α Canis Minoris. Mag. 0.5	
	R. A.	Dec. N.	R. A.	Dec. S.	R. A.	Dec. N.
	^h ^m 7 29	[°] ['] 32 3	^h ^m 7 33	[°] ['] 52 21	^h ^m 7 35	[°] ['] 5 24
Jan. 0.5	46.103 ¹⁵⁸	14.16 ⁴⁵	48.854 ⁹³	54.32 ³⁶²	20.309 ¹³²	66.31 ¹²⁵
10.5	46.261 ¹⁰²	14.61 ⁶¹	48.947 ¹⁹	57.94 ³⁵⁴	20.441 ⁸³	65.06 ¹⁰⁸
20.5	46.363 ⁴³	15.22 ⁷⁴	48.966 ⁵⁴	61.48 ³³⁷	20.524 ³³	63.98 ⁹⁰
30.5	46.406 ¹⁵	15.96 ⁸³	48.912 ¹²⁵	64.85 ³¹¹	20.557 ¹⁷	63.08 ⁷¹
Feb. 9.4	46.391 ⁷⁰	16.79 ⁸⁷	48.787 ¹⁸⁹	67.96 ²⁷⁷	20.540 ⁶³	62.37 ⁵³
19.4	46.321 ¹¹⁹	17.66 ⁸⁵	48.598 ²⁴³	70.73 ²³⁷	20.477 ¹⁰⁴	61.84 ³⁴
29.4	46.202 ¹⁵⁷	18.51 ⁸⁰	48.355 ²⁸⁷	73.10 ¹⁹⁴	20.373 ¹³⁷	61.50 ¹⁸
Mar. 10.3	46.045 ¹⁸⁶	19.31 ⁶⁹	48.068 ³²¹	75.04 ¹⁴⁵	20.236 ¹⁵⁹	61.32 ⁴
20.3	45.859 ²⁰¹	20.00 ⁵⁷	47.747 ³⁴⁰	76.49 ⁹⁶	20.077 ¹⁷⁴	61.28 ¹⁰
30.3	45.658 ²⁰⁸	20.57 ⁴¹	47.407 ³⁴⁸	77.45 ⁴⁴	19.903 ¹⁷⁷	61.38 ²²
Apr. 9.3	45.450 ¹⁹⁹	20.98 ²⁴	47.059 ³⁴⁴	77.89 ⁸	19.726 ¹⁷¹	61.60 ³³
19.2	45.251 ¹⁸²	21.22 ⁸	46.715 ³²⁹	77.81 ⁵⁷	19.555 ¹⁵⁷	61.93 ⁴²
29.2	45.069 ¹⁵⁸	21.30 ⁸	46.386 ³⁰³	77.24 ¹⁰⁸	19.398 ¹³⁴	62.35 ⁵¹
May 9.2	44.911 ¹²³	21.22 ²³	46.083 ²⁷¹	76.16 ¹⁵³	19.264 ¹⁰⁷	62.86 ⁶⁰
19.2	44.788 ⁸⁶	20.99 ³⁴	45.812 ²²⁹	74.63 ¹⁹⁶	19.157 ⁷⁶	63.46 ⁶⁸
29.1	44.702 ⁴⁵	20.65 ⁴⁵	45.583 ¹⁸³	72.67 ²³⁴	19.081 ⁴²	64.14 ⁷⁵
June 8.1	44.657 ³	20.20 ⁵⁴	45.400 ¹³²	70.33 ²⁶⁶	19.039 ⁷	64.89 ⁸⁰
18.1	44.654 ⁴⁰	19.66 ⁶⁰	45.268 ⁷⁹	67.67 ²⁹²	19.032 ²⁸	65.69 ⁸³
28.0	44.694 ⁸⁰	19.06 ⁶⁵	45.189 ²³	64.75 ³⁰⁹	19.060 ⁶³	66.52 ⁸⁴
July 8.0	44.774 ¹²⁰	18.41 ⁶⁷	45.166 ³³	61.66 ³¹⁸	19.123 ⁹⁵	67.36 ⁸⁴
18.0	44.894 ¹⁵⁶	17.74 ⁷¹	45.199 ⁹⁰	58.48 ³¹⁸	19.218 ¹²⁶	68.20 ⁷⁷
28.0	45.050 ¹⁸⁹	17.03 ⁷³	45.289 ¹⁴⁴	55.30 ³⁰⁷	19.344 ¹⁵⁴	68.97 ⁷¹
Aug. 6.9	45.239 ²²⁰	16.30 ⁷⁴	45.433 ¹⁹⁸	52.23 ²⁸⁷	19.498 ¹⁸¹	69.68 ⁵⁸
16.9	45.459 ²⁴⁷	15.56 ⁷⁶	45.631 ²⁴⁶	49.36 ²⁵⁶	19.679 ²⁰⁴	70.26 ⁴⁴
26.9	45.706 ²⁷²	14.80 ⁷⁶	45.877 ²⁹³	46.80 ²¹⁶	19.883 ²²⁶	70.70 ²⁴
Sept. 5.9	45.978 ²⁹⁴	14.04 ⁷⁸	46.170 ³³²	44.64 ¹⁶⁹	20.109 ²⁴⁶	70.94 ³
15.8	46.272 ³¹³	13.26 ⁷⁸	46.502 ³⁶⁵	42.95 ¹¹⁴	20.355 ²⁶³	70.97 ²¹
25.8	46.585 ³²⁸	12.48 ⁷⁸	46.867 ³⁹⁰	41.81 ⁵³	20.618 ²⁷⁶	70.76 ⁴⁶
Oct. 5.8	46.913 ³⁴¹	11.70 ⁷⁵	47.257 ⁴⁰⁷	41.28 ¹¹	20.894 ²⁸⁸	70.30 ⁷⁰
15.7	47.254 ³⁴⁹	10.95 ⁷⁰	47.664 ⁴¹⁴	41.39 ⁷⁶	21.182 ²⁹⁶	69.60 ⁹⁴
25.7	47.603 ³⁵⁰	10.25 ⁶²	48.078 ⁴⁰⁷	42.15 ¹³⁹	21.478 ²⁹⁷	68.66 ¹¹⁴
Nov. 4.7	47.953 ³⁴⁶	9.63 ⁵²	48.485 ³⁹⁰	43.54 ¹⁹⁷	21.775 ²⁹³	67.52 ¹³⁰
14.7	48.299 ³³³	9.11 ³⁸	48.875 ³⁶²	45.51 ²⁴⁹	22.068 ²⁸³	66.22 ¹⁴¹
24.6	48.632 ³¹²	8.73 ²²	49.237 ³²⁰	48.00 ²⁹³	22.351 ²⁶⁴	64.81 ¹⁴⁷
Dec. 4.6	48.944 ²⁸²	8.51 ³	49.557 ²⁶⁸	50.93 ³²⁶	22.615 ²³⁸	63.34 ¹⁴⁸
14.6	49.226 ²⁴²	8.48 ¹⁵	49.825 ²⁰⁶	54.19 ³⁴⁹	22.853 ²⁰³	61.86 ¹⁴¹
24.6	49.468 ¹⁹⁴	8.63 ³⁶	50.031 ¹³⁹	57.68 ³⁵⁹	23.056 ¹⁶³	60.45 ¹³¹
34.5	49.662	8.99	50.170	61.27	23.219	59.14
Mean Place	45.229	25.06	46.600	50.58	19.468	74.52
Sec δ , Tan δ	1.180	+0.626	1.638	-1.297	1.004	+0.095
L α , L δ	+0.02	-0.2	-0.03	-0.2	0.00	-0.2
ω α , ω δ	+0.02	+0.9	-0.03	+0.9	0.00	+0.9
AUTHORITY	A. E.				A. E.	

APPARENT PLACES OF STARS, 1924. 327

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	26 Monocerotis. Mag. 4.1		β Geminorum. Mag. 1.2		ξ Argūs. Mag. 3.5		
	R. A.	Dec. S.	R. A.	Dec. N.	R. A.	Dec. S.	
	^h ^m 7 37	[°] [′] 9 22	^h ^m 7 40	28 12	^h ^m 7 46	[°] [′] 24 40	
Jan.	0.6 10.5 20.5 30.5	37.920 ¹²⁷ 38.047 ⁷⁹ 38.126 ²⁹ 38.155 ²¹	29.64 ²⁰⁷ 31.71 ¹⁹² 33.63 ¹⁷³ 35.36 ¹⁵²	40.912 ¹⁶⁵ 41.077 ¹¹⁰ 41.187 ⁵³ 41.240 ⁴	28.89 ¹⁷ 29.06 ³⁴ 29.40 ⁵⁰ 29.90 ⁶²	7.066 ¹²⁷ 7.193 ⁷⁵ 7.268 ²² 7.290 ³¹	10.47 ²⁸¹ 13.28 ²⁷¹ 15.99 ²⁵³ 18.52 ²²⁸
Feb.	9.4 19.4 29.4	38.134 ⁶⁷ 38.067 ¹⁰⁷ 37.960 ¹⁴⁰	36.88 ¹²⁶ 38.14 ¹⁰⁰ 39.14 ⁷³	41.236 ⁵⁸ 41.178 ¹⁰⁵ 41.073 ¹⁴⁴	30.52 ⁷⁰ 31.22 ⁷² 31.94 ⁷¹	7.259 ⁷⁹ 7.180 ¹²³ 7.057 ¹⁵⁷	20.80 ²⁰⁰ 22.80 ¹⁶⁶ 24.46 ¹³²
Mar.	10.4 20.3 30.3	37.820 ¹⁶⁴ 37.656 ¹⁷⁸ 37.478 ¹⁸³	39.87 ⁴⁷ 40.34 ²⁰ 40.54 ⁶	40.929 ¹⁷³ 40.756 ¹⁹¹ 40.565 ¹⁹⁷	32.65 ⁶⁵ 33.30 ⁵⁷ 33.87 ⁴⁵	6.900 ¹⁸³ 6.717 ²⁰⁰ 6.517 ²⁰⁶	25.78 ⁹⁵ 26.73 ⁵⁸ 27.31 ²⁰
Apr.	9.3 19.3 29.2	37.295 ¹⁷⁸ 37.117 ¹⁶⁴ 36.953 ¹⁴⁴	40.48 ³⁰ 40.18 ⁵⁴ 39.64 ⁷⁷	40.368 ¹⁹² 40.176 ¹⁷⁸ 39.998 ¹⁵⁴	34.32 ³³ 34.65 ¹⁹ 34.84 ⁷	6.311 ²⁰² 6.109 ¹⁹¹ 5.918 ¹⁷²	27.51 ¹⁷ 27.34 ⁵³ 26.81 ⁸⁸
May	9.2 19.2 29.1	36.809 ¹¹⁹ 36.690 ⁸⁹ 36.601 ⁵⁶	38.87 ⁹⁸ 37.89 ¹¹⁷ 36.72 ¹³⁵	39.844 ¹²⁵ 39.719 ⁸⁹ 39.630 ⁵²	34.91 ⁵ 34.86 ¹⁶ 34.70 ²⁶	5.746 ¹⁴⁷ 5.599 ¹¹⁸ 5.481 ⁸⁵	25.93 ¹²⁰ 24.73 ¹⁵² 23.21 ¹⁷⁷
June	8.1 18.1 28.1	36.545 ²² 36.523 ¹³ 36.536 ⁴⁶	35.37 ¹⁴⁸ 33.89 ¹⁵⁹ 32.30 ¹⁶⁵	39.578 ¹³ 39.565 ²⁸ 39.593 ⁶⁶	34.44 ³¹ 34.13 ³⁸ 33.75 ⁴⁴	5.396 ⁵⁰ 5.346 ¹⁴ 5.332 ²²	21.44 ²⁰¹ 19.43 ²¹⁷ 17.26 ²²⁹
July	8.0 18.0 28.0	36.582 ⁸⁰ 36.662 ¹¹⁰ 36.772 ¹⁴¹	30.65 ¹⁶⁶ 28.99 ¹⁶³ 27.36 ¹⁵²	39.659 ¹⁰³ 39.762 ¹³⁹ 39.901 ¹⁷¹	33.31 ⁴⁹ 32.82 ⁵² 32.30 ⁵⁶	5.354 ⁵⁹ 5.413 ⁹³ 5.506 ¹²⁶	14.97 ²³⁴ 12.63 ²³² 10.31 ²²²
Aug.	7.0 16.9 26.9	36.913 ¹⁶⁷ 37.080 ¹⁹⁴ 37.274 ²¹⁷	25.84 ¹³⁷ 24.47 ¹¹⁶ 23.31 ⁸⁹	40.072 ²⁰⁰ 40.272 ²²⁸ 40.500 ²⁵³	31.74 ⁶⁰ 31.14 ⁶⁵ 30.49 ⁷⁰	5.632 ¹⁵⁹ 5.791 ¹⁸⁹ 5.980 ²¹⁶	8.09 ²⁰⁶ 6.03 ¹⁸⁰ 4.23 ¹⁴⁷
Sept.	5.9 15.8 25.8	37.491 ²³⁷ 37.728 ²⁵⁷ 37.985 ²⁷³	22.42 ⁵⁷ 21.85 ²³ 21.62 ¹⁶	40.753 ²⁷⁵ 41.028 ²⁹⁴ 41.322 ³¹²	29.79 ⁷⁴ 29.05 ⁷⁸ 28.27 ⁸¹	6.196 ²⁴² 6.438 ²⁶⁵ 6.703 ²⁸³	2.76 ¹⁰⁹ 1.67 ⁶⁵ 1.02 ¹⁶
Oct.	5.8 15.8 25.7	38.258 ²⁸⁵ 38.543 ²⁹³ 38.836 ²⁹⁶	21.78 ⁵⁴ 22.32 ⁹¹ 23.23 ¹²⁷	41.634 ³²⁶ 41.960 ³³⁵ 42.295 ³³⁹	27.46 ⁸⁴ 26.62 ⁸² 25.80 ⁷⁹	6.986 ²⁹⁹ 7.285 ³⁰⁷ 7.592 ³¹⁰	0.86 ³³ 1.19 ⁸⁵ 2.04 ¹³²
Nov.	4.7 14.7 24.7	39.132 ²⁹¹ 39.423 ²⁸⁰ 39.703 ²⁶¹	24.50 ¹⁵⁷ 26.07 ¹⁸² 27.89 ²⁰¹	42.634 ³³⁷ 42.971 ³²⁶ 43.297 ³⁰⁸	25.01 ⁷² 24.29 ⁶² 23.67 ⁴⁸	7.902 ³⁰⁵ 8.207 ²⁹⁴ 8.501 ²⁷¹	3.36 ¹⁷⁶ 5.12 ²¹⁵ 7.27 ²⁴⁵
Dec.	4.6 14.6 24.6 34.5	39.964 ²³⁵ 40.199 ¹⁹⁹ 40.398 ¹⁵⁸ 40.556 ¹⁵⁸	29.90 ²¹¹ 32.01 ²¹⁵ 34.16 ²¹¹ 36.27 ²¹¹	43.605 ²⁸⁰ 43.885 ²⁴⁴ 44.129 ¹⁹⁹ 44.328 ¹⁹⁹	23.19 ³¹ 22.88 ¹³ 22.75 ⁶ 22.81 ⁶	8.772 ²⁴² 9.014 ²⁰³ 9.217 ¹⁶⁰ 9.377 ¹⁶⁰	9.72 ²⁶⁶ 12.38 ²⁸⁰ 15.18 ²⁸² 18.00 ²⁸²
Mean Place	36.958	22.26	40.094	39.70	5.875	5.15	
Sec δ, Tan δ	1.014	-0.165	1.135	+0.536	1.100	-0.459	
L α, L δ	0.00	-0.2	+0.01	-0.2	-0.01	-0.2	
ω α, ω δ	0.00	+0.9	+0.02	+0.9	-0.01	+0.9	
AUTHORITY	A. N.		A. E.				

328 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	χ Geminorum. Mag. 5.0		ζ Argus. Mag. 2.3		ρ Argus. Mag. 2.9	
	R. A.	Dec. N.	R. A.	Dec. S.	R. A.	Dec. S.
	^h 7 58 ^s	[°] 28 0 [']	^h 8 0 ^s	[°] 39 47 [']	^h 8 4 ^s	[°] 24 4 [']
Jan. 0.6	52.025 ¹⁸⁴	19.83 ⁷	56.319 ¹³⁸	21.28 ³³⁶	19.573 ¹⁴⁶	67.40 ²⁸²
10.5	52.209 ¹³¹	19.90 ²⁹	56.457 ⁷⁸	24.64 ³³¹	19.719 ⁹⁶	70.22 ²⁷²
20.5	52.340 ⁷⁴	20.19 ⁴⁶	56.535 ¹⁷	27.95 ³¹⁷	19.815 ⁴¹	72.94 ²⁵⁷
30.5	52.414 ¹⁷	20.65 ⁶¹	56.552 ⁴²	31.12 ²⁹⁵	19.856 ¹¹	75.51 ²³⁴
Feb. 9.4	52.431 ³⁸	21.26 ⁷¹	56.510 ⁹⁹	34.07 ²⁶⁵	19.845 ⁶⁰	77.85 ²⁰⁶
19.4	52.393 ⁸⁸	21.97 ⁷⁶	56.411 ¹⁴⁸	36.72 ²³⁰	19.785 ¹⁰⁵	79.91 ¹⁷⁵
29.4	52.305 ¹²⁹	22.73 ⁷⁷	56.263 ¹⁸⁹	39.02 ¹⁹¹	19.680 ¹⁴²	81.66 ¹⁴¹
Mar. 10.4	52.176 ¹⁶⁰	23.50 ⁷⁴	56.074 ²²⁰	40.93 ¹⁴⁹	19.538 ¹⁷¹	83.07 ¹⁰⁵
20.3	52.016 ¹⁸¹	24.24 ⁶⁶	55.854 ²⁴²	42.42 ¹⁰⁴	19.367 ¹⁸⁹	84.12 ⁶⁹
30.3	51.835 ¹⁹¹	24.90 ⁵⁵	55.612 ²⁵³	43.46 ⁵⁸	19.178 ¹⁹⁹	84.81 ³³
Apr. 9.3	51.644 ¹⁹⁰	25.45 ⁴³	55.359 ²⁵³	44.04 ¹¹	18.979 ¹⁹⁸	85.14 ⁵
19.3	51.454 ¹⁷⁸	25.88 ³⁰	55.106 ²⁴⁴	44.15 ³³	18.781 ¹⁹⁰	85.09 ⁴⁰
29.2	51.276 ¹⁵⁹	26.18 ¹⁷	54.862 ²²⁷	43.82 ⁷⁸	18.591 ¹⁷⁵	84.69 ⁷⁵
May 9.2	51.117 ¹³¹	26.35 ³	54.635 ²⁰⁴	43.04 ¹²¹	18.416 ¹⁵²	83.94 ¹⁰⁸
19.2	50.986 ¹⁰⁰	26.38 ⁹	54.431 ¹⁷³	41.83 ¹⁶⁰	18.264 ¹²⁶	82.86 ¹³⁷
29.1	50.886 ⁶⁵	26.29 ¹⁹	54.258 ¹³⁹	40.23 ¹⁹⁶	18.138 ⁹⁶	81.49 ¹⁶⁵
June 8.1	50.821 ²⁶	26.10 ²⁹	54.119 ¹⁰²	38.27 ²²⁷	18.042 ⁶²	79.84 ¹⁸⁷
18.1	50.795 ¹¹	25.81 ³⁸	54.017 ⁶¹	36.00 ²⁵²	17.980 ²⁹	77.97 ²⁰⁶
28.1	50.806 ⁴⁸	25.43 ⁴⁴	53.956 ²¹	33.48 ²⁷⁰	17.951 ⁶	75.91 ²¹⁹
July 8.0	50.854 ⁸⁵	24.99 ⁵¹	53.935 ²³	30.78 ²⁸⁰	17.957 ⁴¹	73.72 ²²⁶
18.0	50.939 ¹²¹	24.48 ⁵⁷	53.958 ⁶⁵	27.98 ²⁸⁴	17.998 ⁷⁵	71.46 ²²⁵
28.0	51.060 ¹⁵²	23.91 ⁶³	54.023 ¹⁰⁷	25.14 ²⁷⁶	18.073 ¹⁰⁸	69.21 ²¹⁸
Aug. 7.0	51.212 ¹⁸⁴	23.28 ⁶⁹	54.130 ¹⁴⁸	22.38 ²⁶¹	18.181 ¹⁴¹	67.03 ²⁰²
16.9	51.396 ²¹²	22.59 ⁷⁴	54.278 ¹⁸⁷	19.77 ²³⁸	18.322 ¹⁷³	65.01 ¹⁸¹
26.9	51.608 ²³⁸	21.85 ⁸⁰	54.465 ²²⁴	17.39 ²⁰¹	18.495 ²⁰¹	63.20 ¹⁴⁹
Sept. 5.9	51.846 ²⁶³	21.05 ⁸⁷	54.689 ²⁵⁸	15.38 ¹⁶⁰	18.696 ²²⁹	61.71 ¹¹³
15.8	52.109 ²⁸⁵	20.18 ⁹²	54.947 ²⁸⁸	13.78 ¹¹⁰	18.925 ²⁵⁴	60.58 ⁷¹
25.8	52.394 ³⁰⁵	19.26 ⁹⁶	55.235 ³¹⁴	12.68 ⁵⁷	19.179 ²⁷⁵	59.87 ²³
Oct. 5.8	52.699 ³²²	18.30 ⁹⁸	55.549 ³³⁴	12.11 ¹	19.454 ²⁹⁴	59.64 ²⁵
15.8	53.021 ³³⁴	17.32 ⁹⁸	55.883 ³⁴⁶	12.12 ⁶¹	19.748 ³⁰⁵	59.89 ⁷⁵
25.7	53.355 ³⁴²	16.34 ⁹⁵	56.229 ³⁵⁰	12.73 ¹²⁰	20.053 ³¹²	60.64 ¹²⁴
Nov. 4.7	53.697 ³⁴²	15.39 ⁸⁸	56.579 ³⁴⁵	13.93 ¹⁷⁵	20.365 ³¹¹	61.88 ¹⁶⁸
14.7	54.039 ³³⁶	14.51 ⁷⁷	56.924 ³³¹	15.68 ²²⁴	20.676 ³⁰²	63.56 ²⁰⁷
24.7	54.375 ³²⁰	13.74 ⁶³	57.255 ³⁰⁵	17.92 ²⁶⁶	20.978 ²⁸³	65.63 ²³⁸
Dec. 4.6	54.695 ²⁹⁵	13.11 ⁴⁵	57.560 ²⁷¹	20.58 ²⁹⁹	21.261 ²⁵⁶	68.01 ²⁶²
14.6	54.990 ²⁶¹	12.66 ²⁵	57.831 ²²⁶	23.57 ³²⁰	21.517 ²²¹	70.63 ²⁷⁶
24.6	55.251 ²¹⁸	12.41 ⁴	58.057 ¹⁷⁴	26.77 ³³⁴	21.738 ¹⁷⁸	73.39 ²⁸²
34.5	55.469	12.37	58.231	30.11	21.916	76.21
Mean Place	51.265	30.81	54.720	18.78	18.419	63.18
Sec δ , Tan δ	1.133	+0.532	1.301	-0.833	1.095	-0.447
L α , L δ	+0.01	-0.2	-0.02	-0.2	-0.01	-0.2
ω α , ω δ	+0.02	+0.9	-0.03	+0.9	-0.02	+0.9
AUTHORITY	A. E.		A. E.		A. E.	

APPARENT PLACES OF STARS, 1924. 329

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	γ Argûs. Mag. 2.2			20 Puppis. Mag. 5.1			β Cancri. Mag. 3.8		
	R. A.		Dec. S. .	R. A.		Dec. S.	R. A.		Dec. N.
	h 8 s	m 7	° 47 ′ 6	h 8 s	m 9	° 15 ′ 33	h 8 s	m 12	° 9 ′ 24
Jan. 0.6	13.410	147	44.84	51.368	156	34.89	24.444	175	66.40
10.5	13.557	80	48.38	51.524	107	37.34	24.619	127	65.29
20.5	13.637	12	51.91	51.631	56	39.67	24.746	76	64.37
30.5	13.649	54	55.31	51.687	5	41.84	24.822	25	63.64
Feb. 9.5	13.595	116	58.51	51.692	44	43.79	24.847	25	63.11
19.4	13.479	170	61.42	51.648	88	45.47	24.822	69	62.77
29.4	13.309	217	63.99	51.560	124	46.88	24.753	108	62.61
Mar. 10.4	13.092	253	66.15	51.436	152	47.98	24.645	136	62.60
20.3	12.839	277	67.88	51.284	171	48.78	24.509	157	62.72
30.3	12.562	290	69.14	51.113	181	49.27	24.352	167	62.94
Apr. 9.3	12.272	294	69.92	50.932	181	49.46	24.185	168	63.26
19.3	11.978	287	70.21	50.751	174	49.34	24.017	160	63.64
29.2	11.691	270	70.00	50.577	159	48.94	23.857	143	64.07
May 9.2	11.421	246	69.32	50.418	137	48.26	23.714	122	64.55
19.2	11.175	215	68.17	50.281	113	47.31	23.592	96	65.07
29.2	10.960	179	66.59	50.168	84	46.13	23.496	67	65.62
June 8.1	10.781	138	64.61	50.084	52	44.73	23.429	35	66.19
18.1	10.643	94	62.29	50.032	21	43.16	23.394	3	66.77
28.1	10.549	47	59.68	50.011	12	41.43	23.391	29	67.36
July 8.0	10.502	0	56.86	50.023	45	39.61	23.420	61	67.94
18.0	10.502	48	53.90	50.068	76	37.75	23.481	92	68.49
28.0	10.550	98	50.89	50.144	108	35.90	23.573	120	68.98
Aug. 7.0	10.648	145	47.93	50.252	137	34.13	23.693	149	69.39
16.9	10.793	191	45.10	50.389	167	32.49	23.842	175	69.69
26.9	10.984	235	42.52	50.556	193	31.07	24.017	200	69.85
Sept. 5.9	11.219	275	40.26	50.749	219	29.91	24.217	224	69.84
15.9	11.494	312	38.43	50.968	244	29.08	24.441	246	69.65
25.8	11.806	342	37.12	51.212	264	28.62	24.687	266	69.25
Oct. 5.8	12.148	365	36.35	51.476	282	28.58	24.953	284	68.63
15.8	12.513	379	36.19	51.758	295	28.97	25.237	298	67.80
25.7	12.892	385	36.66	52.053	303	29.78	25.535	307	66.78
Nov. 4.7	13.277	380	37.75	52.356	304	31.02	25.842	310	65.59
14.7	13.657	362	39.43	52.660	298	32.62	26.152	306	64.27
24.7	14.019	333	41.64	52.958	282	34.55	26.458	293	62.87
Dec. 4.6	14.352	295	44.33	53.240	258	36.73	26.751	272	61.44
14.6	14.647	244	47.38	53.498	225	39.09	27.023	243	60.04
24.6	14.891	186	50.71	53.723	186	41.54	27.266	203	58.73
34.6	15.077		54.19	53.909		44.01	27.469		57.53
Mean Place	11.495		43.73	50.377		29.80	23.702		75.04
Sec δ , Tan δ	1.469		-1.077	1.038		-0.278	1.014		+0.166
L α , L δ	-0.02		-0.2	-0.01		-0.2	0.00		-0.2
ω α , ω δ	-0.04		+0.9	-0.01		+0.8	+0.01		+0.8
AUTHORITY	A. E.			A. E.			A. E.		

330 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	<i>d</i> ¹ Cancri. Mag. 5.9		<i>ε</i> Argūs. Mag. 1.7		30 Monocerotis. Mag. 4.0	
	R. A.	Dec. N.	R. A.	Dec. S.	R. A.	Dec. S.
	^h 8 ^m 19	¹⁸ 34	^h 8 ^m 20	⁵⁹ 15	^h 8 ^m 21	³ 39
Jan. 0.6	1.575 ¹⁹¹	28.34 ⁵⁸	60.132 ¹⁷⁸	50.91 ³⁷⁰	52.679 ¹⁷³	33.26 ¹⁸⁷
10.5	1.766 ¹⁴²	27.76 ³⁸	60.310 ⁹²	54.61 ³⁷⁴	52.852 ¹²⁷	35.13 ¹⁷³
20.5	1.908 ⁸⁹	27.38 ¹⁷	60.402 ⁵	58.35 ³⁶⁸	52.979 ⁷⁷	36.86 ¹⁵⁴
30.5	1.997 ³⁵	27.21 ³	60.407 ⁸⁰	62.03 ³⁵³	53.056 ²⁶	38.40 ¹³³
Feb. 9.5	2.032 ¹⁷	27.24 ¹⁹	60.327 ¹⁵⁸	65.56 ³²⁷	53.082 ²²	39.73 ¹¹⁰
19.4	2.015 ⁶⁴	27.43 ³²	60.169 ²³¹	68.83 ²⁹⁶	53.060 ⁶⁶	40.83 ⁸⁵
29.4	1.951 ¹⁰⁵	27.75 ⁴²	59.938 ²⁹¹	71.70 ²⁵⁷	52.994 ¹⁰⁴	41.68 ⁶³
Mar. 10.4	1.846 ¹³⁷	28.17 ⁴⁸	59.647 ³⁴⁰	74.36 ²¹³	52.890 ¹³⁴	42.31 ³⁹
20.4	1.709 ¹⁵⁹	28.65 ⁵⁰	59.307 ³⁷⁶	76.49 ¹⁶⁶	52.756 ¹⁵³	42.70 ¹⁷
30.3	1.550 ¹⁷¹	29.15 ⁵⁰	58.931 ³⁹⁸	78.15 ¹¹⁶	52.603 ¹⁶⁵	42.87 ³
Apr. 9.3	1.379 ¹⁷²	29.65 ⁴⁸	58.533 ⁴⁰⁸	79.31 ⁶⁴	52.438 ¹⁶⁷	42.84 ²²
19.3	1.207 ¹⁶⁷	30.13 ⁴³	58.125 ⁴⁰⁵	79.95 ¹²	52.271 ¹⁶¹	42.62 ⁴²
29.2	1.040 ¹⁵⁰	30.56 ³⁹	57.720 ³⁹¹	80.07 ⁴⁰	52.110 ¹⁴⁸	42.20 ⁵⁸
May 9.2	0.890 ¹²⁹	30.95 ³³	57.329 ³⁶⁶	79.67 ⁹²	51.962 ¹²⁸	41.62 ⁷³
19.2	0.761 ¹⁰¹	31.28 ²⁸	56.963 ³³³	78.75 ¹⁴⁰	51.834 ¹⁰⁴	40.89 ⁸⁸
29.2	0.660 ⁷²	31.56 ²³	56.630 ²⁹⁰	77.35 ¹⁸⁶	51.730 ⁷⁸	40.01 ¹⁰¹
June 8.1	0.588 ³⁹	31.79 ¹⁸	56.340 ²⁴²	75.49 ²²⁶	51.652 ⁴⁸	39.00 ¹¹⁰
18.1	0.549 ⁶	31.97 ¹²	56.098 ¹⁸⁷	73.23 ²⁶⁰	51.604 ¹⁸	37.90 ¹¹⁹
28.1	0.543 ²⁷	32.09 ⁸	55.911 ¹²⁷	70.63 ²⁸⁸	51.586 ¹³	36.71 ¹²³
July 8.1	0.570 ⁵⁹	32.17 ⁰	55.784 ⁶⁴	67.75 ³⁰⁷	51.599 ⁴⁴	35.48 ¹²⁴
18.0	0.629 ⁹²	32.17 ⁶	55.720 ²	64.68 ³¹⁸	51.643 ⁷⁴	34.24 ¹²⁰
28.0	0.721 ¹²²	32.11 ¹⁴	55.722 ⁷⁰	61.50 ³¹⁹	51.717 ¹⁰³	33.04 ¹¹³
Aug. 7.0	0.843 ¹⁵⁰	31.97 ²⁴	55.792 ¹³⁶	58.31 ³⁰⁸	51.820 ¹³¹	31.91 ¹⁰⁰
16.9	0.993 ¹⁷⁹	31.73 ³⁶	55.928 ²⁰³	55.23 ²⁸⁹	51.951 ¹⁵⁸	30.91 ⁸³
26.9	1.172 ²⁰⁴	31.37 ⁴⁷	56.131 ²⁶⁷	52.34 ²⁵⁹	52.109 ¹⁸⁵	30.08 ⁶¹
Sept. 5.9	1.376 ²³⁰	30.90 ⁶¹	56.398 ³²⁵	49.75 ²¹⁸	52.294 ²¹⁰	29.47 ³⁴
15.9	1.606 ²⁵²	30.29 ⁷⁵	56.723 ³⁷⁸	47.57 ¹⁶⁹	52.504 ²³³	29.13 ⁵
25.8	1.858 ²⁷⁵	29.54 ⁸⁸	57.101 ⁴²²	45.88 ¹¹³	52.737 ²⁵⁶	29.08 ²⁷
Oct. 5.8	2.133 ²⁹⁴	28.66 ¹⁰⁰	57.523 ⁴⁵⁷	44.75 ⁵¹	52.993 ²⁷⁴	29.35 ⁶¹
15.8	2.427 ³⁰⁹	27.66 ¹¹²	57.980 ⁴⁷⁹	44.24 ¹⁵	53.267 ²⁸⁹	29.96 ⁹³
25.8	2.736 ³²⁰	26.54 ¹¹⁸	58.459 ⁴⁸⁷	44.39 ⁸¹	53.556 ³⁰⁰	30.89 ¹²³
Nov. 4.7	3.056 ³²⁴	25.36 ¹²¹	58.946 ⁴⁸⁰	45.20 ¹⁴⁵	53.856 ³⁰³	32.12 ¹⁵⁰
14.7	3.380 ³²²	24.15 ¹¹⁹	59.426 ⁴⁵⁹	46.65 ²⁰⁵	54.159 ³⁰⁰	33.62 ¹⁷¹
24.7	3.702 ³¹⁰	22.96 ¹¹⁴	59.885 ⁴²⁰	48.70 ²⁵⁸	54.459 ²⁸⁹	35.33 ¹⁸⁷
Dec. 4.6	4.012 ²⁹⁰	21.82 ¹⁰³	60.305 ³⁶⁸	51.28 ³⁰²	54.748 ²⁶⁸	37.20 ¹⁹⁵
14.6	4.302 ²⁶⁰	20.79 ⁸⁷	60.673 ³⁰⁴	54.30 ³³⁶	55.016 ²³⁹	39.15 ¹⁹⁷
24.6	4.562 ²²²	19.92 ⁶⁹	60.977 ²²⁸	57.66 ³⁶⁰	55.255 ²⁰²	41.12 ¹⁹²
34.6	4.784	19.23	61.205	61.26	55.457	43.04
Mean Place	0.885	38.20	57.347	52.43	51.864	26.89
Sec δ, Tan δ	1.055	+0.336	1.957	-1.682	1.002	-0.064
L α, L δ	+0.01	-0.2	-0.04	-0.2	0.00	-0.2
ω α, ω δ	+0.01	+0.8	-0.06	+0.8	0.00	+0.8
AUTHORITY			A. E.		A. E.	

APPARENT PLACES OF STARS, 1924. 331

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	α Ursæ Majoris. Mag. 3·5		η Cancri. Mag. 5·5		γ Cancri. Mag. 4·7	
	R. A.	Dec. N.	R. A.	Dec. N.	R. A.	Dec. N.
	^h 8	^m 23	^h 8	^m 28	^h 8	^m 38
		^s 23		^s 28		^s 38
		60° 57'		20° 41'		21° 44'
Jan. 0·6	59·14 ₃₄	71·26 ₁₇₈	19·677 ₂₀₃	51·13 ₅₀	54·099 ₂₁₄	24·07 ₄₈
10·6	59·48 ₂₄	73·04 ₂₀₇	19·880 ₁₅₃	50·63 ₂₇	54·313 ₁₆₅	23·59 ₂₅
20·5	59·72 ₁₅	75·11 ₂₂₆	20·033 ₁₀₁	50·36 ₆	54·478 ₁₁₂	23·34 ₂
30·5	59·87 ₄	77·37 ₂₃₇	20·134 ₄₅	50·30 ₁₄	54·590 ₅₈	23·32 ₁₉
Feb. 9·5	59·91 ₅	79·74 ₂₃₇	20·179 ₇	50·44 ₃₁	54·648 ₃	23·51 ₃₇
19·4	59·86 ₁₄	82·11 ₂₂₉	20·172 ₅₆	50·75 ₄₄	54·651 ₄₇	23·88 ₅₁
29·4	59·72 ₂₂	84·40 ₂₀₉	20·116 ₉₈	51·19 ₅₃	54·604 ₉₀	24·39 ₆₀
Mar. 10·4	59·50 ₂₈	86·49 ₁₈₃	20·018 ₁₃₂	51·72 ₅₈	54·514 ₁₂₅	24·99 ₆₆
20·4	59·22 ₃₃	88·32 ₁₄₈	19·886 ₁₅₆	52·30 ₆₀	54·389 ₁₅₁	25·65 ₆₆
30·3	58·89 ₃₇	89·80 ₁₀₉	19·730 ₁₆₉	52·90 ₅₈	54·238 ₁₆₇	26·31 ₆₄
Apr. 9·3	58·52 ₃₇	90·89 ₆₆	19·561 ₁₇₃	53·48 ₅₃	54·071 ₁₇₂	26·95 ₅₉
19·3	58·15 ₃₆	91·55 ₂₃	19·388 ₁₆₈	54·01 ₄₇	53·899 ₁₆₈	27·54 ₅₂
29·3	57·79 ₃₅	91·78 ₂₂	19·220 ₁₅₄	54·48 ₄₀	53·731 ₁₅₇	28·06 ₄₂
May 9·2	57·44 ₃₀	91·56 ₆₃	19·066 ₁₃₃	54·88 ₃₂	53·574 ₁₃₇	28·48 ₃₄
19·2	57·14 ₂₆	90·93 ₁₀₄	18·933 ₁₀₈	55·20 ₂₄	53·437 ₁₁₃	28·82 ₂₄
29·2	56·88 ₂₀	89·89 ₁₃₆	18·825 ₇₉	55·44 ₁₇	53·324 ₈₅	29·06 ₁₆
June 8·1	56·68 ₁₄	88·53 ₁₆₈	18·746 ₄₇	55·61 ₉	53·239 ₅₅	29·22 ₆
18·1	56·54 ₇	86·85 ₁₉₄	18·699 ₁₄	55·70 ₁	53·184 ₂₃	29·28 ₃
28·1	56·47 ₁	84·91 ₂₁₄	18·685 ₁₉	55·71 ₅	53·161 ₉	29·25 ₁₂
July 8·1	56·46 ₇	82·77 ₂₂₉	18·704 ₅₂	55·66 ₁₃	53·170 ₄₂	29·13 ₂₀
18·0	56·53 ₁₃	80·48 ₂₃₉	18·756 ₈₄	55·53 ₂₁	53·212 ₇₄	28·93 ₂₉
28·0	56·66 ₁₉	78·09 ₂₄₄	18·840 ₁₁₄	55·32 ₃₀	53·286 ₁₀₄	28·64 ₃₉
Aug. 7·0	56·85 ₂₆	75·65 ₂₄₄	18·954 ₁₄₄	55·02 ₄₀	53·390 ₁₃₄	28·25 ₄₉
17·0	57·11 ₃₁	73·21 ₂₃₈	19·098 ₁₇₂	54·62 ₅₁	53·524 ₁₆₃	27·76 ₆₀
26·9	57·42 ₃₇	70·83 ₂₃₀	19·270 ₂₀₀	54·11 ₆₂	53·687 ₁₉₁	27·16 ₇₃
Sept. 5·9	57·79 ₄₂	68·53 ₂₁₆	19·470 ₂₂₆	53·49 ₇₄	53·878 ₂₁₈	26·43 ₈₄
15·9	58·21 ₄₆	66·37 ₁₉₈	19·696 ₂₅₀	52·75 ₈₈	54·096 ₂₄₄	25·59 ₉₇
25·8	58·67 ₅₁	64·39 ₁₇₆	19·946 ₂₇₄	51·87 ₉₉	54·340 ₂₆₉	24·62 ₁₀₈
Oct. 5·8	59·18 ₅₃	62·63 ₁₄₉	20·220 ₂₉₄	50·88 ₁₁₀	54·609 ₂₉₁	23·54 ₁₁₉
15·8	59·71 ₅₇	61·14 ₁₁₉	20·514 ₃₁₁	49·78 ₁₁₇	54·900 ₃₁₁	22·35 ₁₂₆
25·8	60·28 ₅₈	59·95 ₈₄	20·825 ₃₂₃	48·61 ₁₂₃	55·211 ₃₂₃	21·09 ₁₃₀
Nov. 4·7	60·86 ₅₈	59·11 ₄₅	21·148 ₃₃₀	47·38 ₁₂₄	55·534 ₃₃₃	19·79 ₁₃₀
14·7	61·44 ₅₈	58·66 ₅	21·478 ₃₂₈	46·14 ₁₂₀	55·867 ₃₃₄	18·49 ₁₂₄
24·7	62·02 ₅₅	58·61 ₃₈	21·806 ₃₁₉	44·94 ₁₁₂	56·201 ₃₂₅	17·25 ₁₁₆
Dec. 4·7	62·57 ₅₁	58·99 ₈₀	22·125 ₂₉₉	43·82 ₉₉	56·526 ₃₀₈	16·09 ₁₀₁
14·6	63·08 ₄₆	59·79 ₁₂₂	22·424 ₂₇₀	42·83 ₈₂	56·834 ₂₈₀	15·08 ₈₃
24·6	63·54 ₃₉	61·01 ₁₅₉	22·694 ₂₃₃	42·01 ₆₂	57·114 ₂₄₄	14·25 ₆₁
34·6	63·93	62·60	22·927	41·39	57·358	13·64
Mean Place	57·99	85·68	19·024	61·24	53·487	34·29
Sec δ, Tan δ	2·061	+1·802	1·069	+0·378	1·077	+0·399
L α, L δ	+0·04	-0·2	+0·01	-0·2	+0·01	-0·3
ω α, ω δ	+0·07	+0·8	+0·02	+0·8	+0·02	+0·8
AUTHORITY	A. E.		A. E.		A. E.	

332 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	α Mali. Mag. 3.7		δ Argūs. Mag. 2.0		ϵ Hydræ. Mag. 3.5	
	R. A.	Dec. S.	R. A.	Dec. S.	R. A.	Dec. N.
	^h ^m 8 40	[°] ['] 32 54	^h ^m 8 42	[°] ['] 54 25	^h ^m 8 42	[°] ['] 6 41
Jan. 0.6	33.552 ¹⁸⁵	42.32 ³¹⁵	38.357 ²⁰⁸	43.44 ³⁶¹	45.855 ²⁰⁰	47.43 ¹³⁶
10.6	33.737 ¹³²	45.47 ³¹⁴	38.565 ¹³³	47.05 ³⁶⁹	46.055 ¹⁵⁴	46.07 ¹¹⁸
20.5	33.869 ⁷⁶	48.61 ³⁰⁴	38.698 ⁵⁷	50.74 ³⁶⁶	46.209 ¹⁰⁴	44.89 ⁹⁷
30.5	33.945 ¹⁸	51.65 ²⁸⁶	38.755 ²⁰	54.40 ³⁵⁴	46.313 ⁵³	43.92 ⁷⁵
Feb. 9.5	33.963 ³⁵	54.51 ²⁶¹	38.735 ⁹³	57.94 ³³¹	46.366 ³	43.17 ⁵⁵
19.4	33.928 ⁸⁶	57.12 ²³²	38.642 ¹⁵⁹	61.25 ³⁰³	46.369 ⁴³	42.62 ³³
29.4	33.842 ¹²⁹	59.44 ¹⁹⁷	38.483 ²¹⁶	64.28 ²⁶⁸	46.326 ³⁴	42.29 ¹⁴
Mar. 10.4	33.713 ¹⁶³	61.41 ¹⁶¹	38.267 ²⁶⁴	66.96 ²²⁷	46.242 ¹¹⁶	42.15 ²
20.4	33.550 ¹⁸⁹	63.02 ¹²¹	38.003 ³⁰⁰	69.23 ¹⁸²	46.126 ¹⁴⁰	42.17 ¹⁶
30.3	33.361 ²⁰⁶	64.23 ⁸¹	37.703 ³²⁶	71.05 ¹³⁵	45.986 ¹⁵⁵	42.33 ²⁸
Apr. 9.3	33.155 ²¹²	65.04 ³	37.377 ³³⁷	72.40 ⁸⁴	45.831 ¹⁶⁰	42.61 ³⁷
19.3	32.943 ²¹⁰	65.43 ³⁹	37.040 ³³⁹	73.24 ³⁴	45.671 ¹⁵⁷	42.98 ⁴⁵
29.3	32.733 ²⁰²	65.40 ⁴²	36.701 ³³²	73.58 ¹⁷	45.514 ¹⁴⁶	43.43 ⁵²
May 9.2	32.531 ¹⁸⁴	64.98 ⁸²	36.369 ³¹⁴	73.41 ⁶⁷	45.368 ¹³⁰	43.95 ⁵⁷
19.2	32.347 ¹⁶⁴	64.16 ¹¹⁹	36.055 ²⁸⁸	72.74 ¹¹⁶	45.238 ¹⁰⁸	44.52 ⁶²
29.2	32.183 ¹³⁷	62.97 ¹⁵³	35.767 ²⁵⁷	71.58 ¹⁶²	45.130 ⁸³	45.14 ⁶⁵
June 8.1	32.046 ¹⁰⁸	61.44 ¹⁸³	35.510 ²¹⁸	69.96 ²⁰²	45.047 ⁵⁶	45.79 ⁶⁷
18.1	31.938 ⁷⁶	59.61 ²¹⁰	35.292 ¹⁷³	67.94 ²³⁸	44.991 ²⁷	46.46 ⁶⁸
28.1	31.862 ⁴³	57.51 ²²⁹	35.119 ¹²⁴	65.56 ²⁶⁸	44.964 ²	47.14 ⁶⁷
July 8.1	31.819 ⁷	55.22 ²⁴³	34.995 ⁷²	62.88 ²⁹⁰	44.966 ³²	47.81 ⁶³
18.0	31.812 ²⁹	52.79 ²⁴⁰	34.923 ¹⁷	59.98 ³⁰³	44.998 ⁶¹	48.44 ⁵⁸
28.0	31.841 ⁶⁶	50.30 ²⁴⁸	34.906 ⁴⁰	56.95 ³⁰⁸	45.059 ⁸⁹	49.02 ⁴⁹
Aug. 7.0	31.907 ¹⁰³	47.82 ²³⁷	34.946 ⁹⁷	53.87 ³⁰²	45.148 ¹¹⁸	49.51 ³⁸
17.0	32.010 ¹³⁹	45.45 ²¹⁹	35.043 ¹⁵⁶	50.85 ²⁸⁶	45.266 ¹⁴⁴	49.89 ²²
26.9	32.149 ¹⁷⁵	43.26 ¹⁹²	35.199 ²¹³	47.99 ²⁵⁹	45.410 ¹⁷²	50.11 ⁵
Sept. 5.9	32.324 ²¹¹	41.34 ¹⁵⁷	35.412 ²⁶⁷	45.40 ²²³	45.582 ¹⁹⁹	50.16 ¹⁷
15.9	32.535 ²⁴³	39.77 ¹¹⁴	35.679 ³¹⁷	43.17 ¹⁷⁷	45.781 ²²⁴	49.99 ³⁹
25.8	32.778 ²⁷²	38.63 ⁶⁷	35.996 ³⁶²	41.40 ¹²⁴	46.005 ²⁴⁸	49.60 ⁶³
Oct. 5.8	33.050 ²⁹⁹	37.96 ¹³	36.358 ³⁹⁷	40.16 ⁶⁴	46.253 ²⁷⁰	48.97 ⁸⁷
15.8	33.349 ³¹⁸	37.83 ⁴¹	36.755 ⁴²⁴	39.52 ²	46.523 ²⁸⁸	48.10 ¹⁰⁹
25.8	33.667 ³³²	38.24 ⁹⁶	37.179 ⁴⁴⁰	39.50 ⁶⁴	46.811 ³⁰³	47.01 ¹²⁹
Nov. 4.7	33.999 ³³⁷	39.20 ¹⁴⁸	37.619 ⁴⁴²	40.14 ¹²⁷	47.114 ³¹¹	45.72 ¹⁴⁶
14.7	34.336 ³³³	40.68 ¹⁹⁶	38.061 ⁴³¹	41.41 ¹⁸⁷	47.425 ³¹²	44.26 ¹⁵⁸
24.7	34.669 ³¹⁹	42.64 ²³⁸	38.492 ⁴⁰⁵	43.28 ²⁴²	47.737 ³⁰⁵	42.68 ¹⁶²
Dec. 4.7	34.988 ²⁹⁴	45.02 ²⁷¹	38.897 ³⁶⁴	45.70 ²⁸⁷	48.042 ²⁸⁷	41.06 ¹⁶³
14.6	35.282 ²⁶⁰	47.73 ²⁹⁶	39.261 ³¹⁴	48.57 ³²⁴	48.329 ²⁶²	39.43 ¹⁵⁶
24.6	35.542 ²¹⁶	50.69 ³⁰⁹	39.575 ²⁵⁰	51.81 ³⁴⁹	48.591 ²²⁸	37.87 ¹⁴⁴
34.6	35.758	53.78	39.825	55.30	48.819	36.43
Mean Place	32.262	41.99	36.063	46.53	45.190	54.96
Sec δ , Tan δ	1.191	-0.647	1.719	-1.398	1.007	+0.117
L α , L δ	-0.01	-0.3	-0.03	-0.3	0.00	-0.3
ω α , ω δ	-0.03	+0.8	-0.06	+0.8	+0.01	+0.8
AUTHORITY	A. E.		A. E.		A. N.	

APPARENT PLACES OF STARS, 1924. 333

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	ζ Hydræ. Mag. 3·3		ι Ursæ Majoris. Mag. 3·1		α Cancri. Mag. 4·3	
	R.A.	Dec. N.	R.A.	Dec. N.	R.A.	Dec. N.
	^h 8 ^m 51	[°] 6 ['] 13	^h 8 ^m 53	[°] 48 ['] 20	^h 8 ^m 54	[°] 12 ['] 8
Jan. 0·6	23·360 ²⁰⁷	61·32 ¹⁴²	61·433 ²⁹⁸	13·87 ⁹²	20·570 ²¹⁶	61·70 ¹¹⁰
10·6	23·567 ¹⁶²	59·90 ¹²³	61·731 ²³⁵	14·79 ¹²⁵	20·786 ¹⁷⁰	60·60 ⁸⁹
20·5	23·729 ¹¹²	58·67 ¹⁰²	61·966 ¹⁶⁵	16·04 ¹⁵²	20·956 ¹²⁰	59·71 ⁶⁷
30·5	23·841 ⁶²	57·65 ⁸⁰	62·131 ⁹¹	17·56 ¹⁷²	21·076 ⁶⁸	59·04 ⁴⁴
Feb. 9·5	23·903 ¹²	56·85 ⁵⁸	62·222 ¹⁷	19·28 ¹⁸⁵	21·144 ¹⁸	58·60 ²²
19·5	23·915 ³⁶	56·27 ³⁷	62·239 ⁵³	21·13 ¹⁸⁹	21·162 ³¹	58·38 ⁴
29·4	23·879 ⁷⁶	55·90 ¹⁷	62·186 ¹¹⁵	23·02 ¹⁸⁵	21·131 ⁷³	58·34 ¹⁴
Mar. 10·4	23·803 ¹⁰⁹	55·73 ⁰	62·071 ¹⁶⁸	24·87 ¹⁷¹	21·058 ¹⁰⁸	58·48 ²⁷
20·4	23·694 ¹³⁵	55·73 ¹⁴	61·903 ²⁰⁹	26·58 ¹⁵¹	20·950 ¹³⁴	58·75 ³⁷
30·3	23·559 ¹⁵⁰	55·87 ²⁸	61·694 ²³⁶	28·09 ¹²⁶	20·816 ¹⁵¹	59·12 ⁴⁴
Apr. 9·3	23·409 ¹⁵⁷	56·15 ³⁷	61·458 ²⁵⁰	29·35 ⁹⁵	20·665 ¹⁵⁷	59·56 ⁴⁹
19·3	23·252 ¹⁵⁶	56·52 ⁴⁶	61·208 ²⁵¹	30·30 ⁶³	20·508 ¹⁵⁷	60·05 ⁵¹
29·3	23·096 ¹⁴⁶	56·98 ⁵²	60·957 ²⁴⁰	30·93 ²⁸	20·351 ¹⁴⁹	60·56 ⁵³
May 9·2	22·950 ¹³¹	57·50 ⁵⁸	60·717 ²¹⁹	31·21 ⁶	20·202 ¹³²	61·09 ⁵²
19·2	22·819 ¹¹¹	58·08 ⁶³	60·498 ¹⁹⁰	31·15 ⁴⁰	20·070 ¹¹³	61·61 ⁵⁰
29·2	22·708 ⁸⁸	58·71 ⁶⁶	60·308 ¹⁵⁴	30·75 ⁷²	19·957 ⁸⁹	62·11 ⁴⁹
June 8·2	22·620 ⁶¹	59·37 ⁶⁹	60·154 ¹¹⁴	30·03 ¹⁰⁰	19·868 ⁶²	62·60 ⁴⁶
18·1	22·559 ³³	60·06 ⁶⁸	60·040 ⁷⁰	29·03 ¹²⁵	19·806 ³⁴	63·06 ⁴²
28·1	22·526 ⁵	60·74 ⁶⁸	59·970 ²⁵	27·78 ¹⁴⁸	19·772 ⁵	63·48 ³⁸
July 8·1	22·521 ²⁴	61·42 ⁶⁵	59·945 ²¹	26·30 ¹⁶⁶	19·767 ²⁵	63·86 ³²
18·0	22·545 ⁵³	62·07 ⁵⁸	59·966 ⁶⁷	24·64 ¹⁸¹	19·792 ⁵³	64·18 ²⁴
28·0	22·598 ⁸¹	62·65 ⁵⁰	60·033 ¹¹²	22·83 ¹⁹³	19·845 ⁸³	64·42 ¹⁴
Aug. 7·0	22·679 ¹⁰⁹	63·15 ³⁸	60·145 ¹⁵⁵	20·90 ²⁰¹	19·928 ¹¹⁰	64·56 ²
17·0	22·788 ¹³⁷	63·53 ²³	60·300 ¹⁹⁸	18·89 ²⁰⁶	20·038 ¹³⁹	64·58 ¹²
26·9	22·925 ¹⁶⁵	63·76 ⁴	60·498 ²³⁸	16·83 ²⁰⁸	20·177 ¹⁶⁷	64·46 ²⁸
Sept. 5·9	23·090 ¹⁹²	63·80 ¹⁶	60·736 ²⁷⁹	14·75 ²⁰⁵	20·344 ¹⁹⁴	64·18 ⁴⁶
15·9	23·282 ²¹⁸	63·64 ³⁹	61·015 ³¹⁶	12·70 ²⁰¹	20·538 ²²¹	63·72 ⁶⁵
25·9	23·500 ²⁴³	63·25 ⁶³	61·331 ³⁵⁰	10·69 ¹⁹⁰	20·759 ²⁴⁷	63·07 ⁸⁵
Oct. 5·8	23·743 ²⁶⁶	62·62 ⁸⁸	61·681 ³⁸²	8·79 ¹⁷⁶	21·006 ²⁷⁰	62·22 ¹⁰⁴
15·8	24·009 ²⁸⁶	61·74 ¹¹¹	62·063 ⁴⁰⁹	7·03 ¹⁵⁹	21·276 ²⁹⁰	61·18 ¹²²
25·8	24·295 ³⁰¹	60·63 ¹³¹	62·472 ⁴³⁰	5·44 ¹³⁶	21·566 ³⁰⁷	59·96 ¹³⁶
Nov. 4·7	24·596 ³¹¹	59·32 ¹⁴⁹	62·902 ⁴⁴⁴	4·08 ¹⁰⁹	21·873 ³¹⁷	58·60 ¹⁴⁷
14·7	24·907 ³¹⁴	57·83 ¹⁶⁰	63·346 ⁴⁴⁶	2·99 ⁷⁸	22·190 ³²¹	57·13 ¹⁵³
24·7	25·221 ³⁰⁷	56·23 ¹⁶⁷	63·792 ⁴³⁷	2·21 ⁴³	22·511 ³¹⁵	55·60 ¹⁵²
Dec. 4·7	25·528 ²⁹²	54·56 ¹⁶⁷	64·229 ⁴¹⁷	1·78 ⁵	22·826 ³⁰⁰	54·08 ¹⁴⁷
14·6	25·820 ²⁶⁷	52·89 ¹⁶¹	64·646 ³⁸⁴	1·73 ³³	23·126 ²⁷⁶	52·61 ¹³⁷
24·6	26·087 ²³⁴	51·28 ¹⁵¹	65·030 ³³⁷	2·06 ⁷⁰	23·402 ²⁴³	51·24 ¹²⁰
34·6	26·321	49·77	65·367	2·76	23·645	50·04
Mean Place	22·721	68·52	60·800	28·01	19·981	69·99
Sec δ, Tan δ	1·006	+0·109	1·504	+1·124	1·023	+0·215
L α, L δ	0·00	-0·3	+0·02	-0·3	0·00	-0·3
ω α, ω δ	0·00	+0·7	+0·05	+0·7	+0·01	+0·7
AUTHORITY	A. E.		A. E.		A. F.	

334 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	κ Cancr. Mag. 5.1		ξ Cancr. Mag. 5.2		λ Argüs. Mag. 2.2	
	R.A.	Dec. N.	R.A.	Dec. N.	R.A.	Dec. S.
	^h ^m 9 3	[°] ['] 10 58	^h ^m 9 4	[°] ['] 22 20	^h ^m 9 5	[°] ['] 43 7
Jan. 0.6	38.551 ²²²	21.84 ¹²⁰	60.133 ²³⁸	63.65 ⁵⁸	13.563 ²²²	27.81 ³³⁷
10.6	38.773 ¹⁷⁸	20.64 ⁹⁹	60.371 ¹⁹²	63.07 ³¹	13.785 ¹⁶³	31.18 ³⁴⁵
20.6	38.951 ¹²⁸	19.65 ⁷⁷	60.563 ¹³⁹	62.76 ⁶	13.948 ¹⁰¹	34.63 ³⁴²
30.5	39.079 ⁷⁷	18.88 ⁵²	60.702 ⁸⁶	62.70 ¹⁹	14.049 ³⁸	38.05 ³³⁰
Feb. 9.5	39.156 ²⁶	18.36 ³¹	60.788 ³¹	62.89 ³⁸	14.087 ²³	41.35 ³¹¹
19.5	39.182 ²³	18.05 ¹⁰	60.819 ²⁰	63.27 ⁵⁶	14.064 ⁸⁰	44.46 ²⁸⁴
29.4	39.159 ⁶⁵	17.95 ⁷	60.799 ⁶⁷	63.83 ⁶⁸	13.984 ¹³⁰	47.30 ²⁵¹
Mar. 10.4	39.094 ¹⁰¹	18.02 ²³	60.732 ¹⁰⁵	64.51 ⁷⁵	13.854 ¹⁷³	49.81 ²¹⁵
20.4	38.993 ¹²⁸	18.25 ³³	60.627 ¹³⁴	65.26 ⁷⁸	13.681 ²⁰⁵	51.96 ¹⁷⁴
30.4	38.865 ¹⁴⁵	18.58 ⁴³	60.493 ¹⁵⁴	66.04 ⁷⁶	13.476 ²²⁷	53.70 ¹³¹
Apr. 9.3	38.720 ¹⁵⁴	19.01 ⁴⁸	60.339 ¹⁶⁴	66.80 ⁷²	13.249 ²⁴²	55.01 ⁸⁵
19.3	38.566 ¹⁵⁵	19.49 ⁵²	60.175 ¹⁶⁵	67.52 ⁶³	13.007 ²⁴⁶	55.86 ⁴⁰
29.3	38.411 ¹⁴⁷	20.01 ⁵³	60.010 ¹⁵⁸	68.15 ⁵⁴	12.761 ²⁴²	56.26 ⁵
May 9.3	38.264 ¹³⁴	20.54 ⁵⁵	59.852 ¹⁴³	68.69 ⁴³	12.519 ²³¹	56.21 ⁵²
19.2	38.130 ¹¹⁴	21.09 ⁵⁴	59.709 ¹²³	69.12 ³²	12.288 ²¹³	55.69 ⁹⁶
29.2	38.016 ⁹³	21.63 ⁵³	59.586 ⁹⁹	69.44 ²⁰	12.075 ¹⁹⁰	54.73 ¹³⁷
June 8.2	37.923 ⁶⁷	22.16 ⁵¹	59.487 ⁷²	69.64 ⁹	11.885 ¹⁶²	53.36 ¹⁷⁴
18.1	37.856 ⁴¹	22.67 ⁴⁷	59.415 ⁴³	69.73 ³	11.723 ¹³⁰	51.62 ²⁰⁸
28.1	37.815 ¹²	23.14 ⁴³	59.372 ¹⁴	69.70 ¹⁴	11.593 ⁹⁵	49.54 ²³⁶
July 8.1	37.803 ¹⁵	23.57 ³⁷	59.358 ¹⁷	69.56 ²⁵	11.498 ⁵⁶	47.18 ²⁵⁷
18.1	37.818 ⁴⁵	23.94 ²⁹	59.375 ⁴⁸	69.31 ³⁷	11.442 ¹⁶	44.61 ²⁷¹
28.0	37.863 ⁷²	24.23 ¹⁹	59.423 ⁷⁸	68.94 ⁴⁸	11.426 ²⁶	41.90 ²⁷⁵
Aug. 7.0	37.935 ¹⁰⁰	24.42 ⁸	59.501 ¹⁰⁷	68.46 ⁶⁰	11.452 ⁷⁰	39.15 ²⁷²
17.0	38.035 ¹²⁸	24.50 ⁸	59.608 ¹³⁸	67.86 ⁷³	11.522 ¹¹⁵	36.43 ²⁵⁸
26.9	38.163 ¹⁵⁸	24.42 ²⁴	59.746 ¹⁶⁷	67.13 ⁸⁷	11.637 ¹⁵⁹	33.85 ²³⁵
Sept. 5.9	38.321 ¹⁸⁵	24.18 ⁴³	59.913 ¹⁹⁶	66.26 ¹⁰⁰	11.796 ²⁰³	31.50 ²⁰²
15.9	38.506 ²¹²	23.75 ⁶³	60.109 ²²⁵	65.26 ¹¹³	11.999 ²⁴⁵	29.48 ¹⁶²
25.9	38.718 ²³⁹	23.12 ⁸⁴	60.334 ²⁵²	64.13 ¹²⁵	12.244 ²⁸⁴	27.86 ¹¹³
Oct. 5.8	38.957 ²⁶⁴	22.28 ¹⁰⁴	60.586 ²⁸⁰	62.88 ¹³⁵	12.528 ³¹⁹	26.73 ⁵⁸
15.8	39.221 ²⁸⁶	21.24 ¹²⁴	60.866 ³⁰²	61.53 ¹⁴⁴	12.847 ³⁴⁷	26.15 ⁰
25.8	39.507 ³⁰³	20.00 ¹³⁹	61.168 ³²¹	60.09 ¹⁴⁷	13.194 ³⁶⁶	26.15 ⁵⁹
Nov. 4.8	39.810 ³¹⁶	18.61 ¹⁵¹	61.489 ³³³	58.62 ¹⁴⁷	13.560 ³⁷⁶	26.74 ¹¹⁹
14.7	40.126 ³²¹	17.10 ¹⁵⁸	61.822 ³⁴⁰	57.15 ¹⁴²	13.936 ³⁷⁴	27.93 ¹⁷⁵
24.7	40.447 ³¹⁶	15.52 ¹⁶⁰	62.162 ³³⁶	55.73 ¹³¹	14.310 ³⁶²	29.68 ²²⁶
Dec. 4.7	40.763 ³⁰⁴	13.92 ¹⁵⁶	62.498 ³²³	54.42 ¹¹⁶	14.672 ³³⁸	31.94 ²⁶⁸
14.6	41.067 ²⁸¹	12.36 ¹⁴⁵	62.821 ²⁹⁹	53.26 ⁹⁶	15.010 ³⁰¹	34.62 ³⁰²
24.6	41.348 ²⁴⁸	10.91 ¹³¹	63.120 ²⁶⁷	52.30 ⁷³	15.311 ²⁵⁵	37.64 ³²⁸
34.6	41.596	9.60	63.387	51.57	15.566	40.92
Mean Place	37.989	29.70	59.630	73.77	11.995	31.23
Sec δ , Tan δ	1.019	+0.194	1.081	+0.411	1.370	-0.937
L a , L δ	0.00	-0.3	+0.01	-0.3	-0.02	-0.3
ω a , ω δ	+0.01	+0.7	+0.02	+0.7	-0.04	+0.7

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APPARENT PLACES OF STARS, 1924. 335

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.			β Argüs. Mag. 1·8		83 Cancr. Mag. 6·6				ι Argüs. Mag. 2·3			
			R.A.		Dec. S.	R.A.		Dec. N.	R.A.		Dec. S.	
			^h 9	^m 12	[°] 69 ['] 24	^h 9	^m 14	[°] 18 ['] 1	^h 9	^m 15	[°] 58 ['] 57	
Jan.	0·6	26·41 ₃₅	6·78 ₃₅₃	45·078 ₂₃₉	32·94 ₈₆	5·846 ₂₇₇	14·52 ₃₅₂					
	10·6	26·76 ₂₃	10·31 ₃₇₄	45·317 ₁₉₆	32·08 ₆₂	6·123 ₁₉₉	18·04 ₃₇₀					
	20·6	26·99 ₁₁	14·05 ₃₈₂	45·513 ₁₄₅	31·46 ₃₇	6·322 ₁₁₅	21·74 ₃₇₅					
	30·5	27·10 ₁	17·87 ₃₈₁	45·658 ₉₃	31·09 ₁₂	6·437 ₃₀	25·49 ₃₇₀					
Feb.	9·5	27·09 ₁₂	21·68 ₃₆₉	45·751 ₃₉	30·97 ₁₁	6·467 ₅₁	29·19 ₃₅₆					
	19·5	26·97 ₂₃	25·37 ₃₄₉	45·790 ₁₁	31·08 ₃₀	6·416 ₁₂₈	32·75 ₃₃₄					
	29·5	26·74 ₃₂	28·86 ₃₂₁	45·779 ₅₅	31·38 ₄₆	6·288 ₁₉₅	36·09 ₃₀₄					
Mar.	10·4	26·42 ₄₁	32·07 ₂₈₇	45·724 ₉₄	31·84 ₅₆	6·093 ₂₅₄	39·13 ₂₆₉					
	20·4	26·01 ₄₇	34·94 ₂₄₅	45·630 ₁₂₄	32·40 ₆₄	5·839 ₃₀₁	41·82 ₂₂₇					
	30·4	25·54 ₅₃	37·39 ₂₀₁	45·506 ₁₄₃	33·04 ₆₇	5·538 ₃₃₇	44·09 ₁₈₃					
Apr.	9·3	25·01 ₅₆	39·40 ₁₅₂	45·363 ₁₅₆	33·71 ₆₆	5·201 ₃₆₀	45·92 ₁₃₄					
	19·3	24·45 ₅₉	40·92 ₁₀₀	45·207 ₁₅₇	34·37 ₆₃	4·841 ₃₇₃	47·26 ₈₄					
	29·3	23·86 ₅₈	41·92 ₄₇	45·050 ₁₅₂	35·00 ₅₇	4·468 ₃₇₄	48·10 ₃₂					
May	9·3	23·28 ₅₈	42·39 ₈	44·898 ₁₄₀	35·57 ₅₁	4·094 ₃₆₆	48·42 ₂₀					
	19·2	22·70 ₅₆	42·31 ₆₀	44·758 ₁₂₂	36·08 ₄₃	3·728 ₃₄₈	48·22 ₇₀					
	29·2	22·14 ₅₂	41·71 ₁₁₂	44·636 ₁₀₀	36·51 ₃₅	3·380 ₃₂₂	47·52 ₁₂₀					
June	8·2	21·62 ₄₈	40·59 ₁₆₂	44·536 ₇₆	36·86 ₂₇	3·058 ₂₈₇	46·32 ₁₆₆					
	18·2	21·14 ₄₁	38·97 ₂₀₅	44·460 ₅₀	37·13 ₁₇	2·771 ₂₄₆	44·66 ₂₀₈					
	28·1	20·73 ₃₄	36·92 ₂₄₅	44·410 ₂₁	37·30 ₇	2·525 ₁₉₉	42·58 ₂₄₃					
July	8·1	20·39 ₂₆	34·47 ₂₇₇	44·389 ₈	37·37 ₂	2·326 ₁₄₆	40·15 ₂₇₃					
	18·1	20·13 ₁₇	31·70 ₃₀₀	44·397 ₃₆	37·35 ₁₃	2·180 ₈₇	37·42 ₂₉₄					
	28·0	19·96 ₇	28·70 ₃₁₆	44·433 ₆₅	37·22 ₂₆	2·093 ₂₄	34·48 ₃₀₆					
Aug.	7·0	19·89 ₂	25·54 ₃₂₁	44·498 ₉₄	36·96 ₃₈	2·069 ₄₁	31·42 ₃₀₈					
	17·0	19·91 ₁₃	22·33 ₃₁₅	44·592 ₁₂₃	36·58 ₅₂	2·110 ₁₀₈	28·34 ₃₀₁					
	27·0	20·04 ₂₄	19·18 ₂₉₇	44·715 ₁₅₃	36·06 ₆₆	2·218 ₁₇₆	25·33 ₂₈₁					
Sept.	5·9	20·28 ₃₃	16·21 ₂₇₀	44·868 ₁₈₂	35·40 ₈₃	2·394 ₂₄₃	22·52 ₂₅₂					
	15·9	20·61 ₄₃	13·51 ₂₃₁	45·050 ₂₁₁	34·57 ₉₉	2·637 ₃₀₇	20·00 ₂₁₃					
	25·9	21·04 ₅₁	11·20 ₁₈₃	45·261 ₂₃₉	33·58 ₁₁₅	2·944 ₃₆₄	17·87 ₁₆₄					
Oct.	5·9	21·55 ₅₈	9·37 ₁₂₇	45·500 ₂₆₆	32·43 ₁₂₉	3·308 ₄₁₅	16·23 ₁₀₈					
	15·8	22·13 ₆₄	8·10 ₆₅	45·766 ₂₉₀	31·14 ₁₄₂	3·723 ₄₅₅	15·15 ₄₆					
	25·8	22·77 ₆₇	7·45 ₁	46·056 ₃₁₀	29·72 ₁₅₀	4·178 ₄₈₁	14·69 ₁₅					
Nov.	4·8	23·44 ₆₈	7·46 ₆₈	46·366 ₃₂₅	28·22 ₁₅₅	4·659 ₄₉₄	14·88 ₈₄					
	14·7	24·12 ₆₇	8·14 ₁₃₃	46·691 ₃₃₁	26·67 ₁₅₅	5·153 ₄₉₂	15·72 ₁₄					
	24·7	24·79 ₆₄	9·47 ₁₉₆	47·022 ₃₃₀	25·12 ₁₄₉	5·645 ₄₇₁	17·19 ₂₀					
Dec.	4·7	25·43 ₅₈	11·43 ₂₅₀	47·352 ₃₁₈	23·63 ₁₃₇	6·116 ₄₃₆	19·26 ₂₅₁					
	14·7	26·01 ₅₀	13·93 ₂₉₈	47·670 ₂₉₇	22·26 ₁₂₂	6·552 ₃₈₅	21·84 ₃₀					
	24·6	26·51 ₄₀	16·91 ₃₃₅	47·967 ₂₆₇	21·04 ₁₀₀	6·937 ₃₂₅	24·87 ₃₄					
	34·6	26·91	20·26	48·234	20·04	7·262	28·27					
Mean Place			22·34	14·59	44·601	42·06	3·311	21·32				
Sec δ , Tan δ			2·842	-2·661	1·052	+0·325	1·939	-1·661				
L α , L δ			-0·05	-0·3	+0·01	-0·3	-0·03	-0·3				
ω α , ω δ			-0·13	+0·7	+0·02	+0·7	-0·08	+0·7				
AUTHORITY			A. E.		A. E.		A. N.					

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AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	40 Lyncis. Mag. 3.3		h Mali. Mag. 4.9		κ Argūs. Mag. 2.6			
	R.A.	Dec. N.	R.A.	Dec. S.	R.A.	Dec. S.		
	^h 9	^m 16	[°] 34	[′] 42	^h 9	^m 19	[°] 54	[′] 41
Jan.	0.6	26.268 ²⁷⁴	41.14 ³	8.429 ²²¹	29.39 ²⁸⁸	47.654 ²⁶⁸	2.72 ³⁴⁸	
	10.6	26.542 ²²⁴	41.17 ³⁶	8.650 ¹⁷⁴	32.27 ²⁸⁷	47.922 ¹⁹⁸	6.20 ³⁶⁴	
	20.6	26.766 ¹⁶⁸	41.53 ⁶⁶	8.824 ¹²³	35.14 ²⁷⁹	48.120 ¹²³	9.84 ³⁶⁹	
	30.5	26.934 ¹⁰⁷	42.19 ⁹¹	8.947 ⁷⁰	37.93 ²⁶⁴	48.243 ⁴⁷	13.53 ³⁶⁴	
Feb.	9.5	27.041 ⁴⁷	43.10 ¹¹²	9.017 ¹⁷	40.57 ²⁴³	48.290 ²⁸	17.17 ³⁵⁰	
	19.5	27.088 ¹¹	44.22 ¹²⁵	9.034 ³³	43.00 ²¹⁶	48.262 ⁹⁷	20.67 ³²⁷	
	29.5	27.077 ⁶⁵	45.47 ¹³³	9.001 ⁷⁷	45.16 ¹⁸⁷	48.165 ¹⁵⁹	23.94 ²⁹⁷	
Mar.	10.4	27.012 ¹⁰⁹	46.80 ¹³³	8.924 ¹¹²	47.03 ¹⁵⁵	48.006 ²¹³	26.91 ²⁶²	
	20.4	26.903 ¹⁴⁴	48.13 ¹²⁷	8.812 ¹⁴³	48.58 ¹²⁰	47.793 ²⁵⁶	29.53 ²²¹	
	30.4	26.759 ¹⁷⁰	49.40 ¹¹⁶	8.669 ¹⁶²	49.78 ⁸⁶	47.537 ²⁸⁹	31.74 ¹⁷⁹	
Apr.	9.3	26.589 ¹⁸⁴	50.56 ⁹⁹	8.507 ¹⁷⁵	50.64 ⁵⁰	47.248 ³¹⁰	33.53 ¹²⁹	
	19.3	26.405 ¹⁸⁸	51.55 ⁸⁰	8.332 ¹⁷⁸	51.14 ¹⁵	46.938 ³²²	34.82 ⁸¹	
	29.3	26.217 ¹⁸³	52.35 ⁵⁷	8.154 ¹⁷⁶	51.29 ¹⁹	46.616 ³²⁴	35.63 ³⁰	
May	9.3	26.034 ¹⁷⁰	52.92 ³⁵	7.978 ¹⁶⁵	51.10 ⁵⁵	46.292 ³¹⁶	35.93 ²⁰	
	19.2	25.864 ¹⁵⁰	53.27 ¹¹	7.813 ¹⁵²	50.55 ⁸⁶	45.976 ²⁹⁹	35.73 ⁷⁰	
	29.2	25.714 ¹²⁵	53.38 ¹²	7.661 ¹³²	49.69 ¹¹⁶	45.677 ²⁷⁷	35.03 ¹¹⁷	
June	8.2	25.589 ⁹⁶	53.26 ³⁴	7.529 ¹¹⁰	48.53 ¹⁴⁴	45.400 ²⁴⁸	33.86 ¹⁶³	
	18.2	25.493 ⁶⁴	52.92 ⁵⁵	7.419 ⁸⁵	47.09 ¹⁶⁷	45.152 ²¹¹	32.23 ²⁰²	
	28.1	25.429 ³¹	52.37 ⁷⁴	7.334 ⁵⁸	45.42 ¹⁸⁷	44.941 ¹⁶⁹	30.21 ²³⁸	
July	8.1	25.398 ⁴	51.63 ⁹²	7.276 ²⁹	43.55 ¹⁹⁹	44.772 ¹²³	27.83 ²⁶⁵	
	18.1	25.402 ³⁷	50.71 ¹⁰⁷	7.247 ¹	41.56 ²⁰⁸	44.649 ⁷²	25.18 ²⁸⁶	
	28.0	25.439 ⁷²	49.64 ¹²²	7.248 ³²	39.48 ²⁰⁹	44.577 ¹⁸	22.32 ²⁹⁸	
Aug.	7.0	25.511 ¹⁰⁶	48.42 ¹³⁶	7.280 ⁶⁶	37.39 ²⁰²	44.559 ³⁹	19.34 ²⁹⁹	
	17.0	25.617 ¹⁴⁰	47.06 ¹⁴⁶	7.346 ⁹⁹	35.37 ¹⁸⁸	44.598 ⁹⁸	16.35 ²⁹²	
	27.0	25.757 ¹⁷³	45.60 ¹⁵⁶	7.445 ¹³⁴	33.49 ¹⁶⁶	44.696 ¹⁵⁹	13.43 ²⁷³	
Sept.	5.9	25.930 ²⁰⁷	44.04 ¹⁶⁵	7.579 ¹⁶⁸	31.83 ¹³⁷	44.855 ²¹⁷	10.70 ²⁴⁴	
	15.9	26.137 ²³⁹	42.39 ¹⁷⁰	7.747 ²⁰²	30.46 ¹⁰¹	45.072 ²⁷⁴	8.26 ²⁰⁴	
	25.9	26.376 ²⁷²	40.69 ¹⁷³	7.949 ²³⁵	29.45 ⁶⁰	45.346 ³²⁷	6.22 ¹⁵⁶	
Oct.	5.9	26.648 ³⁰¹	38.96 ¹⁷³	8.184 ²⁶⁵	28.85 ¹³	45.673 ³⁷³	4.66 ¹⁰³	
	15.8	26.949 ³²⁹	37.23 ¹⁷⁰	8.449 ²⁹¹	28.72 ³⁵	46.046 ⁴¹⁰	3.63 ⁴¹	
	25.8	27.278 ³⁵¹	35.53 ¹⁶¹	8.740 ³¹²	29.07 ⁸⁵	46.456 ⁴³⁷	3.22 ²¹	
Nov.	4.8	27.629 ³⁶⁸	33.92 ¹⁴⁸	9.052 ³²⁴	29.92 ¹³²	46.893 ⁴⁵¹	3.43 ⁸⁶	
	14.7	27.997 ³⁷⁵	32.44 ¹³¹	9.376 ³²⁹	31.24 ¹⁷⁶	47.344 ⁴⁵²	4.29 ¹⁴⁹	
	24.7	28.372 ³⁷⁴	31.13 ¹⁰⁷	9.705 ³²⁵	33.00 ²¹⁴	47.796 ⁴³⁶	5.78 ²⁰⁵	
Dec.	4.7	28.746 ³⁶²	30.06 ⁷⁹	10.030 ³⁰⁸	35.14 ²⁴⁶	48.232 ⁴⁰⁷	7.83 ²⁵⁷	
	14.7	29.108 ³³⁸	29.27 ⁴⁹	10.338 ²⁸⁴	37.60 ²⁶⁹	48.639 ³⁶³	10.40 ³⁰⁰	
	24.6	29.446 ³⁰⁸	28.78 ¹⁷	10.622 ²⁴⁸	40.29 ²⁸²	49.002 ³⁰⁷	13.40 ³³³	
	34.6	29.754	28.61	10.870	43.11	49.309	16.73	
Mean Place	25.839	53.50	7.444	30.32	45.504	9.36		
Sec δ, Tan δ	1.217	+0.693	1.109	-0.480	1.730	-1.412		
L α, L δ	+0.01	-0.3	-0.01	-0.3	-0.02	-0.3		
ω α, ω δ	+0.03	+0.7	-0.02	+0.7	-0.07	+0.7		
AUTHORITY	A. E.		A. E.		A. E.			

APPARENT PLACES OF STARS, 1924. 337

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	α Hydræ. Mag. 2.2		ψ Argûs. Mag. 3.6		θ Ursæ Majoris. Mag. 3.3	
	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. N.
	^h 9 ^m 23 _s	[°] 8 ['] 19	^h 9 ^m 27 _s	[°] 40 ['] 7	^h 9 ^m 27 _s	[°] 52 ['] 0
Jan. . 0.6	51.859 ²²⁶	44.90 ²²⁰	43.556 ²⁴⁴	56.91 ³²⁴	47.533 ³⁵⁵	73.75 ⁸²
10.6	52.085 ¹⁸³	47.10 ²¹⁰	43.800 ¹⁹⁰	60.15 ³³⁴	47.888 ²⁹⁴	74.57 ¹²²
20.6	52.268 ¹³⁵	49.20 ¹⁹⁴	43.990 ¹³²	63.49 ³³³	48.182 ²²²	75.79 ¹⁵⁶
30.5	52.403 ⁸⁶	51.14 ¹⁷⁵	44.122 ⁷²	66.82 ³²⁵	48.404 ¹⁴⁵	77.35 ¹⁸³
Feb. 9.5	52.489 ³⁶	52.89 ¹⁵¹	44.194 ¹³	70.07 ³⁰⁷	48.549 ⁶⁷	79.18 ²⁰³
19.5	52.525 ¹¹	54.40 ¹²⁶	44.207 ⁴⁴	73.14 ²⁸⁵	48.616 ¹¹	81.21 ²¹¹
29.5	52.514 ⁵²	55.66 ¹⁰⁰	44.163 ⁹³	75.99 ²⁵⁴	48.605 ⁸¹	83.32 ²¹³
Mar. 10.4	52.462 ⁸⁹	56.66 ⁷⁵	44.070 ¹³⁶	78.53 ²²⁰	48.524 ¹⁴⁴	85.45 ²⁰³
20.4	52.373 ¹¹⁶	57.41 ⁴⁹	43.934 ¹⁷¹	80.73 ¹⁸²	48.380 ¹⁹⁴	87.48 ¹⁸⁵
30.4	52.257 ¹³⁶	57.90 ²⁵	43.763 ¹⁹⁶	82.55 ¹⁴²	48.186 ²³²	89.33 ¹⁶¹
Apr. 9.3	52.121 ¹⁴⁸	58.15 ¹	43.567 ²¹³	83.97 ⁹⁹	47.954 ²⁵⁶	90.94 ¹³⁰
19.3	51.973 ¹⁵¹	58.16 ²⁰	43.354 ²²¹	84.96 ⁵⁶	47.698 ²⁶⁸	92.24 ⁹⁶
29.3	51.822 ¹⁴⁸	57.96 ⁴⁰	43.133 ²²¹	85.52 ¹²	47.430 ²⁶⁵	93.20 ⁵⁷
May 9.3	51.674 ¹³⁹	57.56 ⁵⁹	42.912 ²¹⁵	85.64 ³²	47.165 ²⁵³	93.77 ²⁰
19.2	51.535 ¹²⁵	56.97 ⁷⁷	42.697 ²⁰¹	85.32 ⁷³	46.912 ²³⁰	93.97 ²⁰
29.2	51.410 ¹⁰⁷	56.20 ⁹²	42.496 ¹⁸⁴	84.59 ¹¹⁴	46.682 ²⁰¹	93.77 ⁵⁷
June 8.2	51.303 ⁸⁶	55.28 ¹⁰⁶	42.312 ¹⁶⁰	83.45 ¹⁵²	46.481 ¹⁶³	93.20 ⁹¹
18.2	51.217 ⁶²	54.22 ¹¹⁷	42.152 ¹³⁴	81.93 ¹⁸⁵	46.318 ¹²³	92.29 ¹²⁴
28.1	51.155 ³⁹	53.05 ¹²⁴	42.018 ¹⁰⁴	80.08 ²¹⁴	46.195 ⁸⁰	91.05 ¹⁵³
July 8.1	51.116 ¹²	51.81 ¹²⁹	41.914 ⁷⁰	77.94 ²³⁶	46.115 ³³	89.52 ¹⁷⁷
18.1	51.104 ¹⁴	50.52 ¹²⁸	41.844 ³⁶	75.58 ²⁵²	46.082 ¹⁴	87.75 ¹⁹⁹
28.0	51.118 ⁴²	49.24 ¹²⁴	41.808 ⁴	73.06 ²⁵⁹	46.096 ⁶⁰	85.76 ²¹⁷
Aug. 7.0	51.160 ⁷⁰	48.00 ¹¹³	41.812 ⁴⁴	70.47 ²⁵⁸	46.156 ¹⁰⁸	83.59 ²²⁹
17.0	51.230 ¹⁰⁰	46.87 ⁹⁹	41.856 ⁸⁷	67.89 ²⁴⁹	46.264 ¹⁵⁵	81.30 ²³⁹
27.0	51.330 ¹²⁹	45.88 ⁷⁹	41.943 ¹²⁹	65.40 ²²⁸	46.419 ²⁰²	78.91 ²⁴⁴
Sept. 5.9	51.459 ¹⁵⁹	45.09 ⁵³	42.072 ¹⁷²	63.12 ¹⁹⁹	46.621 ²⁴⁸	76.47 ²⁴⁵
15.9	51.618 ¹⁹⁰	44.56 ²⁴	42.244 ²¹⁵	61.13 ¹⁶³	46.869 ²⁹²	74.02 ²⁴¹
25.9	51.808 ²¹⁹	44.32 ¹⁰	42.459 ²⁵⁶	59.50 ¹¹⁹	47.161 ³³⁵	71.61 ²³²
Oct. 5.9	52.027 ²⁴⁶	44.42 ⁴⁵	42.715 ²⁹²	58.31 ⁶⁷	47.496 ³⁷⁵	69.29 ²²¹
15.8	52.273 ²⁷²	44.87 ⁸⁰	43.007 ³²⁴	57.64 ¹¹	47.871 ⁴¹¹	67.08 ²⁰¹
25.8	52.545 ²⁹²	45.67 ¹¹⁵	43.331 ³⁴⁸	57.53 ⁴⁶	48.282 ⁴⁴¹	65.07 ¹⁷⁷
Nov. 4.8	52.837 ³⁰⁷	46.82 ¹⁴⁸	43.679 ³⁶³	57.99 ¹⁰³	48.723 ⁴⁶⁴	63.30 ¹⁴⁸
14.7	53.144 ³¹⁴	48.30 ¹⁷⁶	44.042 ³⁶⁹	59.02 ¹⁵⁹	49.187 ⁴⁷⁵	61.82 ¹¹²
24.7	53.458 ³¹²	50.06 ¹⁹⁹	44.411 ³⁶²	60.61 ²⁰⁹	49.662 ⁴⁷⁶	60.70 ⁷⁵
Dec. 4.7	53.770 ³⁰²	52.05 ²¹³	44.773 ³⁴⁴	62.70 ²⁵²	50.138 ⁴⁶²	59.95 ³²
14.7	54.072 ²⁸⁰	54.18 ²²³	45.117 ³¹⁴	65.22 ²⁸⁷	50.600 ⁴³⁴	59.63 ¹²
24.6	54.352 ²⁵⁰	56.41 ²²³	45.431 ²⁷⁴	68.09 ³¹⁴	51.034 ³⁹²	59.75 ⁵⁵
34.6.	54.602	58.64	45.705	71.23	51.426	60.30
Mean Place	51.191	42.13	42.200	61.62	47.106	88.90
Sec δ , Tan δ	1.011	-0.146	1.308	-0.843	1.625	+1.281
L α , L δ	0.00	-0.3	-0.01	-0.3	+0.02	-0.3
ω α , ω δ	-0.01	+0.6	-0.04	+0.6	+0.07	+0.6
AUTHORITY	A. E.		A. E.		A. E.	

338 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	ξ Leonis. Mag. 5.1		N Velorum. Mag. 3.0		κ Hydræ. Mag. 5.0	
	R.A.	Dec. N.	R.A.	Dec. S.	R.A.	Dec. S.
	^h 9 _s 27	[°] 11 _' 37	^h 9 _s 28	[°] 56 _' 41	^h 9 _s 36	[°] 13 _' 59
Jan. 0.6	51.560 ₂₄₂	66.44 ₁₂₆	57.012 ₂₉₁	47.00 ₃₄₅	40.464 ₂₃₅	12.89 ₂₄₄
10.6	51.802 ₂₀₀	65.18 ₁₀₄	57.303 ₂₁₈	50.45 ₃₆₄	40.699 ₁₉₃	15.33 ₂₃₈
20.6	52.002 ₁₅₂	64.14 ₈₀	57.521 ₁₄₁	54.09 ₃₇₁	40.892 ₁₄₆	17.71 ₂₂₆
30.5	52.154 ₁₀₂	63.34 ₅₄	57.662 ₆₁	57.80 ₃₆₈	41.038 ₉₆	19.97 ₂₀₈
Feb. 9.5	52.256 ₅₀	62.80 ₃₀	57.723 ₁₆	61.48 ₃₅₇	41.134 ₄₆	22.05 ₁₈₆
19.5	52.306 ₁	62.50 ₉	57.707 ₉₀	65.05 ₃₃₆	41.180 ₁	23.91 ₁₆₁
29.5	52.307 ₄₃	62.41 ₁₁	57.617 ₁₅₅	68.41 ₃₀₉	41.179 ₄₅	25.52 ₁₃₄
Mar. 10.4	52.264 ₈₀	62.52 ₂₇	57.462 ₂₁₂	71.50 ₂₇₄	41.134 ₈₁	26.86 ₁₀₇
20.4	52.184 ₁₁₁	62.79 ₃₉	57.250 ₂₅₉	74.24 ₂₃₆	41.053 ₁₁₁	27.93 ₇₈
30.4	52.073 ₁₃₂	63.18 ₄₈	56.991 ₂₉₆	76.60 ₁₉₂	40.942 ₁₃₃	28.71 ₅₁
Apr. 9.3	51.941 ₁₄₄	63.66 ₅₅	56.695 ₃₂₁	78.52 ₁₄₆	40.809 ₁₄₆	29.22 ₂₄
19.3	51.797 ₁₄₉	64.21 ₅₇	56.374 ₃₃₅	79.98 ₉₆	40.663 ₁₅₁	29.46 ₃
29.3	51.648 ₁₄₅	64.78 ₅₈	56.039 ₃₄₀	80.94 ₄₆	40.512 ₁₅₁	29.43 ₂₇
May 9.3	51.503 ₁₃₅	65.36 ₅₈	55.699 ₃₃₅	81.40 ₅	40.361 ₁₄₄	29.16 ₅₂
19.2	51.368 ₁₂₂	65.94 ₅₆	55.364 ₃₂₂	81.35 ₅₆	40.217 ₁₃₂	28.64 ₇₄
29.2	51.246 ₁₀₁	66.50 ₅₃	55.042 ₃₀₀	80.79 ₁₀₅	40.085 ₁₁₇	27.90 ₉₄
June 8.2	51.145 ₈₁	67.03 ₄₉	54.742 ₂₇₂	79.74 ₁₅₁	39.968 ₉₇	26.96 ₁₁₃
18.2	51.064 ₅₆	67.52 ₄₄	54.470 ₂₃₆	78.23 ₁₉₂	39.871 ₇₆	25.83 ₁₂₈
28.1	51.008 ₃₁	67.96 ₃₉	54.234 ₁₉₅	76.31 ₂₃₀	39.795 ₅₄	24.55 ₁₄₀
July 8.1	50.977 ₅	68.35 ₃₀	54.039 ₁₄₈	74.01 ₂₆₁	39.741 ₂₈	23.15 ₁₄₈
18.1	50.972 ₂₂	68.65 ₂₂	53.891 ₉₆	71.40 ₂₈₃	39.713 ₂	21.67 ₁₅₁
28.0	50.994 ₄₉	68.87 ₁₁	53.795 ₃₉	68.57 ₂₉₈	39.711 ₂₅	20.16 ₁₄₉
Aug. 7.0	51.043 ₇₆	68.98 ₃	53.756 ₂₁	65.59 ₃₀₂	39.736 ₅₅	18.67 ₁₄₂
17.0	51.119 ₁₀₅	68.95 ₁₈	53.777 ₈₄	62.57 ₂₉₆	39.791 ₈₄	17.25 ₁₂₇
27.0	51.224 ₁₃₅	68.77 ₃₄	53.861 ₁₄₈	59.61 ₂₈₀	39.875 ₁₁₅	15.98 ₁₀₈
Sept. 5.9	51.359 ₁₆₄	68.43 ₅₄	54.009 ₂₁₁	56.81 ₂₅₃	39.990 ₁₄₈	14.90 ₈₃
15.9	51.523 ₁₉₂	67.89 ₇₄	54.220 ₂₇₃	54.28 ₂₁₆	40.138 ₁₇₉	14.07 ₅₂
25.9	51.715 ₂₂₃	67.15 ₉₄	54.493 ₃₃₀	52.12 ₁₇₀	40.317 ₂₁₂	13.55 ₁₆
Oct. 5.9	51.938 ₂₅₀	66.21 ₁₁₅	54.823 ₃₈₀	50.42 ₁₁₆	40.529 ₂₄₁	13.39 ₂₂
15.8	52.188 ₂₇₇	65.06 ₁₃₄	55.203 ₄₂₃	49.26 ₅₆	40.770 ₂₆₉	13.61 ₆₂
25.8	52.465 ₂₉₇	63.72 ₁₄₉	55.626 ₄₅₃	48.70 ₇	41.039 ₂₉₃	14.23 ₁₀₂
Nov. 4.8	52.762 ₃₁₄	62.23 ₁₆₀	56.079 ₄₇₁	48.77 ₇₂	41.332 ₃₀₈	15.25 ₁₃₉
14.7	53.076 ₃₂₃	60.63 ₁₆₈	56.550 ₄₇₃	49.49 ₁₃₆	41.640 ₃₁₈	16.64 ₁₇₄
24.7	53.399 ₃₂₄	58.95 ₁₆₉	57.023 ₄₅₉	50.85 ₁₉₄	41.958 ₃₁₉	18.38 ₂₀₂
Dec. 4.7	53.723 ₃₁₅	57.26 ₁₆₅	57.482 ₄₃₁	52.79 ₂₄₈	42.277 ₃₀₈	20.40 ₂₂₃
14.7	54.038 ₂₉₅	55.61 ₁₅₃	57.913 ₃₈₈	55.27 ₂₉₂	42.585 ₂₈₈	22.63 ₂₃₇
24.6	54.333 ₂₆₇	54.08 ₁₃₈	58.301 ₃₃₀	58.19 ₃₂₈	42.873 ₂₆₀	25.00 ₂₄₄
34.6	54.600	52.70	58.631	61.47	43.133	27.44
Mean Place	51.102	73.86	54.757	54.77	39.766	12.16
Sec δ, Tan δ	1.021	+0.206	1.821	-1.522	1.031	-0.249
L α, L δ	0.00	-0.3	-0.02	-0.3	0.00	-0.3
ω α, ω δ	+0.01	+0.6	-0.08	+0.6	-0.01	+0.6
AUTHORITY			A. N.		A. N.	

APPARENT PLACES OF STARS, 1924. 339

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	α Leonis. Mag. 3.8		ε Leonis. Mag. 3.1		μ Leonis. Mag. 4.1	
	R.A.	Dec. N.	R.A.	Dec. N.	R.A.	Dec. N.
	^h 9 ^m 37	[°] 10 ['] 13	^h 9 ^m 41	[°] 24 ['] 7	^h 9 ^m 48	[°] 26 ['] 21
Jan. 0.6	6.230 ²⁴⁸	72.93 ¹³⁷	32.785 ²⁷⁰	19.41 ⁶⁸	26.994 ²⁸⁰	45.85 ⁶²
10.6	6.478 ²⁰⁶	71.56 ¹¹⁴	33.055 ²²⁹	18.73 ³⁹	27.274 ²³⁸	45.23 ³⁰
20.6	6.684 ¹⁶⁰	70.42 ⁹¹	33.284 ¹⁷⁸	18.34 ⁸	27.512 ¹⁸⁸	44.93 ²
30.6	6.844 ¹¹⁰	69.51 ⁶⁵	33.462 ¹²⁶	18.26 ¹⁹	27.700 ¹³⁵	44.95 ³²
Feb. 9.5	6.954 ⁵⁹	68.86 ⁴¹	33.588 ⁷¹	18.45 ⁴⁵	27.835 ⁷⁹	45.27 ⁵⁷
19.5	7.013 ¹⁰	68.45 ¹⁸	33.659 ¹⁸	18.90 ⁶⁶	27.914 ²⁵	45.84 ⁷⁹
29.5	7.023 ³⁴	68.27 ³	33.677 ³¹	19.56 ⁸²	27.939 ²⁵	46.63 ⁹⁵
Mar. 10.4	6.989 ⁷³	68.30 ²⁰	33.646 ⁷³	20.38 ⁹²	27.914 ⁶⁹	47.58 ¹⁰⁴
20.4	6.916 ¹⁰³	68.50 ³⁴	33.573 ¹⁰⁸	21.30 ⁹⁷	27.845 ¹⁰⁴	48.62 ¹⁰⁹
30.4	6.813 ¹²⁵	68.84 ⁴⁵	33.465 ¹³²	22.27 ⁹⁶	27.741 ¹³²	49.71 ¹⁰⁷
Apr. 9.4	6.688 ¹³⁹	69.29 ⁵²	33.333 ¹⁵¹	23.23 ⁹²	27.609 ¹⁴⁹	50.78 ¹⁰⁰
19.3	6.549 ¹⁴⁵	69.81 ⁵⁷	33.182 ¹⁵⁶	24.15 ⁸³	27.460 ¹⁵⁹	51.78 ⁹⁰
29.3	6.404 ¹⁴²	70.38 ⁵⁹	33.026 ¹⁵⁷	24.98 ⁷¹	27.301 ¹⁵⁹	52.68 ⁷⁶
May 9.3	6.262 ¹³⁵	70.97 ⁶⁰	32.869 ¹⁴⁸	25.69 ⁵⁹	27.142 ¹⁵²	53.44 ⁶¹
19.3	6.127 ¹²²	71.57 ⁵⁹	32.721 ¹³⁵	26.28 ⁴⁴	26.990 ¹³⁹	54.05 ⁴⁴
29.2	6.005 ¹⁰⁵	72.16 ⁵⁷	32.586 ¹¹⁷	26.72 ²⁸	26.851 ¹²³	54.49 ²⁶
June 8.2	5.900 ⁸⁴	72.73 ⁵⁴	32.469 ⁹⁴	27.00 ¹³	26.728 ¹⁰¹	54.75 ⁸
18.2	5.816 ⁶²	73.27 ⁵⁰	32.375 ⁷¹	27.13 ³	26.627 ⁷⁷	54.83 ⁹
28.1	5.754 ³⁹	73.77 ⁴⁴	32.304 ⁴⁵	27.10 ¹⁸	26.550 ⁵¹	54.74 ²⁷
July 8.1	5.715 ¹³	74.21 ³⁷	32.259 ¹⁶	26.92 ³⁴	26.499 ²⁴	54.47 ⁴⁴
18.1	5.702 ¹³	74.58 ²⁸	32.243 ¹¹	26.58 ⁴⁹	26.475 ⁴	54.03 ⁶¹
28.1	5.715 ⁴⁰	74.86 ¹⁷	32.254 ⁴⁰	26.09 ⁶⁴	26.479 ³³	53.42 ⁷⁸
Aug. 7.0	5.755 ⁶⁷	75.03 ⁵	32.294 ⁷⁰	25.45 ⁷⁹	26.512 ⁶³	52.64 ⁹³
17.0	5.822 ⁹⁵	75.08 ¹¹	32.364 ¹⁰⁰	24.66 ⁹⁴	26.575 ⁹³	51.71 ¹⁰⁹
27.0	5.917 ¹²⁴	74.97 ²⁹	32.464 ¹³²	23.72 ¹¹⁰	26.668 ¹²⁶	50.62 ¹²⁴
Sept. 6.0	6.041 ¹⁵⁴	74.68 ⁴⁹	32.596 ¹⁶³	22.62 ¹²⁴	26.794 ¹⁵⁷	49.38 ¹³⁸
15.9	6.195 ¹⁸⁴	74.19 ⁶⁹	32.759 ¹⁹⁵	21.38 ¹³⁸	26.951 ¹⁹¹	48.00 ¹⁵²
25.9	6.379 ²¹⁴	73.50 ⁹¹	32.954 ²²⁷	20.00 ¹⁵¹	27.142 ²²⁴	46.48 ¹⁶⁴
Oct. 5.9	6.593 ²⁴³	72.59 ¹¹³	33.181 ²⁵⁸	18.49 ¹⁶²	27.366 ²⁵⁶	44.84 ¹⁷³
15.8	6.836 ²⁷¹	71.46 ¹³²	33.439 ²⁸⁷	16.87 ¹⁶⁹	27.622 ²⁸⁷	43.11 ¹⁷⁸
25.8	7.107 ²⁹³	70.14 ¹⁵⁰	33.726 ³¹¹	15.18 ¹⁷³	27.909 ³¹³	41.33 ¹⁸¹
Nov. 4.8	7.400 ³¹¹	68.64 ¹⁶⁴	34.037 ³²⁸	13.45 ¹⁷¹	28.222 ³³⁴	39.52 ¹⁷⁷
14.8	7.711 ³²¹	67.00 ¹⁷²	34.365 ³⁴⁷	11.74 ¹⁶⁵	28.556 ³⁴⁸	37.75 ¹⁶⁸
24.7	8.032 ³²⁴	65.28 ¹⁷⁵	34.712 ³⁴⁷	10.09 ¹⁵³	28.904 ³⁵⁴	36.07 ¹⁵⁴
Dec. 4.7	8.356 ³¹⁶	63.53 ¹⁷²	35.059 ³⁴¹	8.56 ¹³⁵	29.258 ³⁴⁸	34.53 ¹³⁴
14.7	8.672 ²⁹⁹	61.81 ¹⁶²	35.400 ³²³	7.21 ¹¹³	29.606 ³³²	33.19 ¹⁰⁹
24.7	8.971 ²⁷¹	60.19 ¹⁴⁸	35.723 ²⁹⁶	6.08 ⁸⁸	29.938 ³⁰⁴	32.10 ⁸¹
34.6	9.242	58.71	36.019	5.20	30.242	31.29
Mean Place	5.803	79.77	32.463	29.46	26.718	56.32
Sec δ, Tan δ	1.016	+0.181	1.096	+0.448	1.116	+0.496
L α, L δ	0.00	-0.3	+0.01	-0.3	+0.01	-0.3
ω α, ω δ	+0.01	+0.6	+0.02	+0.6	+0.03	+0.5
AUTHORITY	A. N.		A. E.		A. N.	

340 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	π Leonis. Mag. 4.9		α Leonis. Mag. 1.3		γ Velorum. Mag. 4.1	
	R.A.	Dec. N.	R.A.	Dec. N.	R.A.	Dec. S.
	^h 9 ^m 56	[°] 8 24	^h 10 ^m 4	[°] 12 19	^h 10 ^m 11	[°] 41 44
Jan. 0.6	12.276 ₂₆₀	28.43 ₁₅₂	19.887 ₂₆₉	74.60 ₁₃₇	33.665 ₂₉₄	33.45 ₃₀₈
10.6	12.536 ₂₂₁	26.91 ₁₃₁	20.156 ₂₃₁	73.23 ₁₁₃	33.959 ₂₄₆	36.53 ₃₂₅
20.6	12.757 ₁₇₆	25.60 ₁₀₇	20.387 ₁₈₇	72.10 ₈₇	34.205 ₁₉₁	39.78 ₃₃₃
30.6	12.933 ₁₂₈	24.53 ₈₁	20.574 ₁₃₈	71.23 ₅₉	34.396 ₁₃₂	43.11 ₃₃₁
Feb. 9.5	13.061 ₇₈	23.72 ₅₆	20.712 ₈₇	70.64 ₃₃	34.528 ₇₃	46.42 ₃₂₂
19.5	13.139 ₂₉	23.16 ₃₂	20.799 ₃₉	70.31 ₈	34.601 ₁₅	49.64 ₃₀₄
29.5	13.168 ₁₆	22.84 ₈	20.838 ₈	70.23 ₁₄	34.616 ₃₈	52.68 ₂₈₀
Mar. 10.4	13.152 ₅₅	22.76 ₁₀	20.830 ₄₇	70.37 ₃₃	34.578 ₈₆	55.48 ₂₅₂
20.4	13.097 ₈₇	22.86 ₂₇	20.783 ₈₂	70.70 ₄₇	34.492 ₁₂₅	58.00 ₂₁₈
30.4	13.010 ₁₁₁	23.13 ₄₀	20.701 ₁₀₇	71.17 ₅₇	34.367 ₁₅₈	60.18 ₁₈₂
Apr. 9.4	12.899 ₁₂₇	23.53 ₄₉	20.594 ₁₂₅	71.74 ₆₅	34.209 ₁₈₃	62.00 ₁₄₂
19.3	12.772 ₁₃₇	24.02 ₅₆	20.469 ₁₃₅	72.39 ₆₇	34.026 ₁₉₉	63.42 ₁₀₁
29.3	12.635 ₁₃₇	24.58 ₆₀	20.334 ₁₃₈	73.06 ₆₈	33.827 ₂₀₈	64.43 ₅₈
May 9.3	12.498 ₁₃₃	25.18 ₆₃	20.196 ₁₃₅	73.74 ₆₆	33.619 ₂₁₀	65.01 ₁₅
19.3	12.365 ₁₂₄	25.81 ₆₃	20.061 ₁₂₅	74.40 ₆₂	33.409 ₂₀₆	65.16 ₂₇
29.2	12.241 ₁₀₉	26.44 ₆₂	19.936 ₁₁₃	75.02 ₅₈	33.203 ₁₉₈	64.89 ₇₀
June 8.2	12.132 ₉₂	27.06 ₆₀	19.823 ₉₆	75.60 ₅₁	33.005 ₁₈₃	64.19 ₁₀₉
18.2	12.040 ₇₃	27.66 ₅₆	19.727 ₇₈	76.11 ₄₄	32.822 ₁₆₅	63.10 ₁₄₇
28.1	11.967 ₅₁	28.22 ₅₁	19.649 ₅₇	76.55 ₃₅	32.657 ₁₄₂	61.63 ₁₈₁
July 8.1	11.916 ₂₉	28.73 ₄₄	19.592 ₃₅	76.90 ₂₅	32.515 ₁₁₄	59.82 ₂₀₇
18.1	11.887 ₄	29.17 ₃₅	19.557 ₁₀	77.15 ₁₄	32.401 ₈₄	57.75 ₂₃₀
28.1	11.883 ₂	29.52 ₂₅	19.547 ₁₄	77.29 ₂	32.317 ₄₈	55.45 ₂₄₅
Aug. 7.0	11.905 ₄₇	29.77 ₁₂	19.561 ₄₁	77.31 ₁₃	32.269 ₁₀	53.00 ₂₅₁
17.0	11.952 ₇₅	29.89 ₄	19.602 ₆₉	77.18 ₂₉	32.259 ₃₁	50.49 ₂₄₉
27.0	12.027 ₁₀₅	29.85 ₂₃	19.671 ₉₉	76.89 ₄₇	32.290 ₇₆	48.00 ₂₃₆
Sept. 6.0	12.132 ₁₃₅	29.62 ₄₂	19.770 ₁₂₉	76.42 ₆₆	32.366 ₁₂₃	45.64 ₂₁₇
15.9	12.267 ₁₆₇	29.20 ₆₅	19.899 ₁₆₁	75.76 ₈₇	32.489 ₁₇₁	43.47 ₁₈₇
25.9	12.434 ₁₉₈	28.55 ₈₇	20.060 ₁₉₄	74.89 ₁₀₈	32.660 ₂₁₈	41.60 ₁₄₉
Oct. 5.9	12.632 ₂₂₉	27.68 ₁₁₁	20.254 ₂₂₅	73.81 ₁₂₉	32.878 ₂₆₂	40.11 ₁₀₃
15.8	12.861 ₂₅₉	26.57 ₁₃₂	20.479 ₂₅₇	72.52 ₁₄₇	33.140 ₃₀₄	39.08 ₅₁
25.8	13.120 ₂₈₄	25.25 ₁₅₂	20.736 ₂₈₃	71.05 ₁₆₃	33.444 ₃₃₇	38.57 ₅
Nov. 4.8	13.404 ₃₀₆	23.73 ₁₆₈	21.019 ₃₀₆	69.42 ₁₇₅	33.781 ₃₆₄	38.62 ₆₂
14.8	13.710 ₃₁₉	22.05 ₁₇₉	21.325 ₃₂₂	67.67 ₁₈₂	34.145 ₃₇₉	39.24 ₁₁₈
24.7	14.029 ₃₂₄	20.26 ₁₈₄	21.647 ₃₂₈	65.85 ₁₈₃	34.524 ₃₈₃	40.42 ₁₇₁
Dec. 4.7	14.353 ₃₂₀	18.42 ₁₈₃	21.975 ₃₂₇	64.02 ₁₇₈	34.907 ₃₇₅	42.13 ₂₁₉
14.7	14.673 ₃₀₆	16.59 ₁₇₆	22.302 ₃₁₃	62.24 ₁₆₇	35.282 ₃₅₄	44.32 ₂₆₁
24.7	14.979 ₂₈₂	14.83 ₁₆₃	22.615 ₂₉₁	60.57 ₁₅₀	35.636 ₃₂₀	46.93 ₂₉₂
34.6	15.261	13.20	22.906	59.07	35.956	49.85
Mean Place	11.922	34.23	19.604	81.22	32.481	41.91
Sec δ , Tan δ	1.011	+0.148	1.024	+0.219	1.340	-0.892
L α , L δ	0.00	-0.3	0.00	-0.3	-0.01	-0.4
ω α , ω δ	+0.01	+0.5	+0.01	+0.5	-0.05	+0.5
AUTHORITY	A. E.		A. E.		A. E.	

APPARENT PLACES OF STARS, 1924. 341

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	22 Sextantis. Mag. 5.4		γ Carinæ. Mag. 3.4		γ Leonis (1st star). Mag. 2.6	
	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. N.
	^h 10 ^s 13 ^m	[°] 7 ['] 41 ["]	^h 10 ^s 14 ^m	[°] 60 ['] 56 ["]	^h 10 ^s 15 ^m	[°] 20 ['] 13 ["]
Jan. 0.6	51.679 ²⁶³	20.48 ²²²	34.82 ³⁹	55.17 ³¹⁸	47.280 ²⁸⁹	27.18 ¹⁰⁷
10.6	51.942 ²²⁶	22.70 ²¹³	35.21 ³²	58.35 ³⁴⁶	47.569 ²⁵¹	26.11 ⁷⁷
20.6	52.168 ¹⁸⁴	24.83 ¹⁹⁸	35.53 ²⁴	61.81 ³⁶⁵	47.820 ²⁰⁷	25.34 ⁴⁷
30.6	52.352 ¹³⁶	26.81 ¹⁷⁹	35.77 ¹⁶	65.46 ³⁷⁴	48.027 ¹⁵⁷	24.87 ¹⁵
Feb. 9.5	52.488 ⁸⁸	28.60 ¹⁵⁶	35.93 ⁷	69.20 ³⁷³	48.184 ¹⁰⁶	24.72 ¹⁴
19.5	52.576 ⁴⁰	30.16 ¹³²	36.00 ¹	72.93 ³⁶²	48.290 ⁵³	24.86 ⁴⁰
29.5	52.616 ⁴	31.48 ¹⁰⁷	35.99 ⁹	76.55 ³⁴⁴	48.343 ⁶	25.26 ⁶⁰
Mar. 10.5	52.612 ⁴²	32.55 ⁸¹	35.90 ¹⁶	79.99 ³¹⁹	48.349 ³⁸	25.86 ⁷⁷
20.4	52.570 ⁷⁵	33.36 ⁵⁶	35.74 ²¹	83.18 ²⁸⁶	48.311 ⁷⁴	26.63 ⁸⁷
30.4	52.495 ¹⁰⁰	33.92 ³³	35.53 ²⁷	86.04 ²⁴⁹	48.237 ¹⁰³	27.50 ⁹³
Apr. 9.4	52.395 ¹¹⁹	34.25 ¹¹	35.26 ³¹	88.53 ²⁰⁷	48.134 ¹²³	28.43 ⁹⁴
19.3	52.276 ¹³⁰	34.36 ¹⁰	34.95 ³⁴	90.60 ¹⁶⁰	48.011 ¹³⁶	29.37 ⁹⁰
29.3	52.146 ¹³³	34.26 ²⁸	34.61 ³⁶	92.20 ¹¹³	47.875 ¹⁴¹	30.27 ⁸³
May 9.3	52.013 ¹³²	33.98 ⁴⁵	34.25 ³⁶	93.33 ⁶¹	47.734 ¹³⁹	31.10 ⁷³
19.3	51.881 ¹²⁷	33.53 ⁶²	33.89 ³⁸	93.94 ¹⁰	47.595 ¹³²	31.83 ⁶²
29.2	51.754 ¹¹⁶	32.91 ⁷⁶	33.51 ³⁵	94.04 ⁴²	47.463 ¹²⁰	32.45 ⁴⁹
June 8.2	51.638 ¹⁰⁴	32.15 ⁸⁹	33.16 ³⁴	93.62 ⁹²	47.343 ¹⁰⁵	32.94 ³⁴
18.2	51.534 ⁸⁸	31.26 ⁹⁸	32.82 ³³	92.70 ¹³⁹	47.238 ⁸⁷	33.28 ²⁰
28.2	51.446 ⁶⁹	30.28 ¹⁰⁵	32.49 ²⁸	91.31 ¹⁸⁴	47.151 ⁶⁵	33.48 ⁵
July 8.1	51.377 ⁵⁰	29.23 ¹¹¹	32.21 ²⁴	89.47 ²²²	47.086 ⁴⁴	33.53 ¹²
18.1	51.327 ²⁷	28.12 ¹¹¹	31.97 ¹⁹	87.25 ²⁵⁵	47.042 ¹⁹	33.41 ²⁷
28.1	51.300 ⁴	27.01 ¹⁰⁷	31.78 ¹³	84.70 ²⁷⁸	47.023 ⁵	33.14 ⁴⁴
Aug. 7.0	51.296 ²³	25.94 ¹⁰⁰	31.65 ⁸	81.92 ²⁹⁴	47.028 ³⁴	32.70 ⁵⁹
17.0	51.319 ⁵⁰	24.94 ⁸⁷	31.57 ⁰	78.98 ³⁰⁰	47.062 ⁶¹	32.11 ⁷⁸
27.0	51.369 ⁸¹	24.07 ⁷⁰	31.57 ⁷	75.98 ²⁹⁵	47.123 ⁹¹	31.33 ⁹⁷
Sept. 6.0	51.450 ¹¹²	23.37 ⁴⁷	31.64 ¹⁵	73.03 ²⁸⁰	47.214 ¹²⁴	30.36 ¹¹³
15.9	51.562 ¹⁴⁶	22.90 ²¹	31.79 ²³	70.23 ²⁵³	47.338 ¹⁵⁷	29.23 ¹³³
25.9	51.708 ¹⁸⁰	22.69 ¹⁰	32.02 ³⁰	67.70 ²¹⁵	47.495 ¹⁹¹	27.90 ¹⁴⁹
Oct. 5.9	51.888 ²¹³	22.79 ⁴²	32.32 ³⁶	65.55 ¹⁶⁹	47.686 ²²⁶	26.41 ¹⁶⁴
15.9	52.101 ²⁴⁶	23.21 ⁷⁷	32.68 ⁴³	63.86 ¹¹⁵	47.912 ²⁵⁹	24.77 ¹⁷⁷
25.8	52.347 ²⁷⁴	23.98 ¹¹¹	33.11 ⁴⁸	62.71 ⁵⁵	48.171 ²⁸⁸	23.00 ¹⁸⁶
Nov. 4.8	52.621 ²⁹⁸	25.09 ¹⁴⁴	33.59 ⁵¹	62.16 ¹⁰	48.459 ³¹³	21.14 ¹⁹¹
14.8	52.919 ³¹³	26.53 ¹⁷⁰	34.10 ⁵³	62.26 ⁷⁴	48.772 ³³²	19.23 ¹⁸⁸
24.7	53.232 ³²¹	28.23 ¹⁹⁴	34.63 ⁵³	63.00 ¹³⁷	49.104 ³⁴²	17.35 ¹⁸²
Dec. 4.7	53.553 ³¹⁹	30.17 ²¹¹	35.16 ⁵²	64.37 ¹⁹⁶	49.446 ³⁴¹	15.53 ¹⁶⁸
14.7	53.872 ³⁰⁶	32.28 ²²¹	35.68 ⁴⁸	66.33 ²⁴⁹	49.787 ³³¹	13.85 ¹⁵⁰
24.7	54.178 ²⁸⁴	34.49 ²²³	36.16 ⁴³	68.82 ²⁹⁴	50.118 ³⁰⁹	12.35 ¹²⁴
34.6	54.462	36.72	36.59	71.76	50.427	11.11
Mean Place	51.236	19.92	32.53	67.70	47.114	35.64
Sec δ, Tan δ	1.009	-0.135	2.059	-1.800	1.066	+0.368
L α, L δ	0.00	-0.4	-0.02	-0.4	0.00	-0.4
ω α, ω δ	-0.01	+0.5	-0.11	+0.4	+0.02	+0.4
AUTHORITY						

342 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	μ Ursæ Majoris. Mag. 3.2		μ Hydræ. Mag. 4.1		α Antliæ. Mag. 4.4	
	R.A.	Dec. N.	R.A.	Dec. S.	R.A.	Dec. S.
	h m 10 17	° ′ 41 52	h m 10 22	° ′ 16 26	h m 10 23	° ′ 30 40
Jan.	0.7 48.574 ^s ₃₅₀	42.81 ¹⁰	25.367 ²⁷⁰	49.52 ²⁵⁰	41.107 ²⁸⁴	44.23 ²⁸⁴
	10.6 48.924 ₃₀₆	42.71 ³³	25.637 ²³⁴	52.02 ²⁴⁸	41.391 ²⁴³	47.07 ²⁹⁵
	20.6 49.230 ₂₅₂	43.04 ⁷⁴	25.871 ¹⁹⁰	54.50 ²⁴¹	41.634 ¹⁹⁶	50.02 ²⁹⁷
	30.6 49.482 ₁₉₂	43.78 ¹¹¹	26.061 ¹⁴³	56.91 ²²⁶	41.830 ¹⁴⁵	52.99 ²⁹⁰
Feb.	9.5 49.674 ₁₂₉	44.89 ¹⁴¹	26.204 ⁹³	59.17 ²⁰⁷	41.975 ⁹²	55.89 ²⁷⁸
	19.5 49.803 ₆₄	46.30 ¹⁶⁵	26.297 ⁴⁶	61.24 ¹⁸⁵	42.067 ⁴⁰	58.67 ²⁵⁹
	29.5 49.867 ₃	47.95 ¹⁸⁰	26.343 ¹	63.09 ¹⁵⁹	42.107 ⁸	61.26 ²³⁵
Mar.	10.5 49.870 ₅₂	49.75 ¹⁸⁶	26.344 ³⁸	64.68 ¹³²	42.099 ⁵¹	63.61 ²⁰⁷
	20.4 49.818 ₁₀₁	51.61 ¹⁸⁴	26.306 ⁷³	66.00 ¹⁰⁴	42.048 ⁸⁷	65.68 ¹⁷⁶
	30.4 49.717 ₁₃₈	53.45 ¹⁷³	26.233 ⁹⁹	67.04 ⁷⁷	41.961 ¹¹⁷	67.44 ¹⁴²
Apr.	9.4 49.579 ₁₆₈	55.18 ¹⁵⁷	26.134 ¹¹⁹	67.81 ⁴⁹	41.844 ¹³⁹	68.86 ¹⁰⁹
	19.4 49.411 ₁₈₆	56.75 ¹³⁵	26.015 ¹³¹	68.30 ²³	41.705 ¹⁵⁵	69.95 ⁷⁴
	29.3 49.225 ₁₉₄	58.10 ¹⁰⁸	25.884 ¹³⁸	68.53 ³	41.550 ¹⁶³	70.69 ³⁷
May	9.3 49.031 ₁₉₄	59.18 ⁷⁷	25.746 ¹³⁹	68.50 ²⁹	41.387 ¹⁶⁵	71.06 ¹
	19.3 48.837 ₁₈₆	59.95 ⁴⁵	25.607 ¹³⁵	68.21 ⁵¹	41.222 ¹⁶³	71.07 ³³
	29.2 48.651 ₁₇₂	60.40 ¹³	25.472 ¹²⁶	67.70 ⁷⁵	41.059 ¹⁵⁶	70.74 ⁶⁸
June	8.2 48.479 ₁₅₂	60.53 ²⁰	25.346 ¹¹⁶	66.95 ⁹⁴	40.903 ¹⁴⁵	70.06 ¹⁰⁰
	18.2 48.327 ₁₂₇	60.33 ⁵²	25.230 ¹⁰¹	66.01 ¹¹²	40.758 ¹³⁰	69.06 ¹²⁸
	28.2 48.200 ₁₀₁	59.81 ⁸²	25.129 ⁸³	64.89 ¹²⁶	40.628 ¹¹²	67.78 ¹⁵⁵
July	8.1 48.099 ₇₀	58.99 ¹¹⁰	25.046 ⁶⁴	63.63 ¹³⁸	40.516 ⁹⁰	66.23 ¹⁷⁷
	18.1 48.029 ₃₈	57.89 ¹³⁷	24.982 ⁴³	62.25 ¹⁴⁴	40.426 ⁶⁶	64.46 ¹⁹³
	28.1 47.991 ₄	56.52 ¹⁶⁰	24.939 ¹⁸	60.81 ¹⁴⁶	40.360 ³⁷	62.53 ²⁰⁴
Aug.	7.1 47.987 ₃₁	54.92 ¹⁸¹	24.921 ⁹	59.35 ¹⁴³	40.323 ⁷	60.49 ²⁰⁶
	17.0 48.018 ₆₈	53.11 ²⁰⁰	24.930 ³⁸	57.92 ¹³³	40.316 ²⁷	58.43 ²⁰²
	27.0 48.086 ₁₀₇	51.11 ²¹⁴	24.968 ⁷⁰	56.59 ¹¹⁷	40.343 ⁶⁵	56.41 ¹⁹⁰
Sept.	6.0 48.193 ₁₄₇	48.97 ²²⁸	25.038 ¹⁰⁴	55.42 ⁹⁶	40.408 ¹⁰⁴	54.51 ¹⁶⁹
	15.9 48.340 ₁₈₈	46.69 ²³⁵	25.142 ¹³⁹	54.46 ⁶⁸	40.512 ¹⁴⁴	52.82 ¹⁴¹
	25.9 48.528 ₂₂₉	44.34 ²⁴⁰	25.281 ¹⁷⁵	53.78 ³⁶	40.656 ¹⁸⁷	51.41 ¹⁰⁶
Oct.	5.9 48.757 ₂₇₀	41.94 ²⁴⁰	25.456 ²¹¹	53.42 ¹	40.843 ²²⁶	50.35 ⁶³
	15.9 49.027 ₃₀₉	39.54 ²³⁵	25.667 ²⁴⁶	53.43 ⁴¹	41.069 ²⁶⁵	49.72 ¹⁸
	25.8 49.336 ₃₄₆	37.19 ²²⁴	25.913 ²⁷⁶	53.84 ⁸¹	41.334 ²⁹⁸	49.54 ³²
Nov.	4.8 49.682 ₃₇₅	34.95 ²⁰⁶	26.189 ³⁰⁰	54.65 ¹²¹	41.632 ³²⁴	49.86 ⁸²
	14.8 50.057 ₃₉₇	32.89 ¹⁸³	26.489 ³¹⁹	55.86 ¹⁵⁷	41.956 ³⁴²	50.68 ¹³⁰
	24.8 50.454 ₄₀₉	31.06 ¹⁵⁴	26.808 ³²⁶	57.43 ¹⁸⁹	42.298 ³⁵⁰	51.98 ¹⁷⁶
Dec.	4.7 50.863 ₄₁₁	29.52 ¹¹⁹	27.134 ³²⁵	59.32 ²¹⁶	42.648 ³⁴⁷	53.74 ²¹⁶
	14.7 51.274 ₄₀₀	28.33 ⁷⁹	27.459 ³¹³	61.48 ²³⁵	42.995 ³³²	55.90 ²⁴⁸
	24.7 51.674 ₃₇₄	27.54 ³⁷	27.772 ²⁹¹	63.83 ²⁴⁶	43.327 ³⁰⁶	58.38 ²⁷³
	34.6 52.048	27.17	28.063	66.29	43.633	61.11
Mean Place	48.534	56.39	24.842	51.96	40.315	50.77
Sec δ , Tan δ	1.343	+0.897	1.043	-0.295	1.163	-0.593
L α , L δ	+0.01	-0.4	0.00	-0.4	-0.01	-0.4
ω α , ω δ	+0.05	+0.4	-0.02	+0.4	-0.04	+0.4
AUTHORITY	A. E.		A. E.		A. E.	

APPARENT PLACES OF STARS, 1924. 343

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	ρ Leonis. Mag. 3.9		34 Sextantis. Mag. 6.6		θ Argûs. Mag. 3.0	
	R.A.	Dec. N.	R.A.	Dec. N.	R.A.	Dec. S.
	^h 10 28	^m 9 41	^h 10 38	^m 3 58	^h 10 40	^m 63 59
Jan.	0.7 48.850 ^s 282	48.26 ^s 158	42.276 ^s 283	47.62 ^s 183	16.75 ^s 47	32.65 ^s 294
	10.6 49.132 248	46.68 ^s 135	42.559 250	45.79 ^s 165	17.22 ^s 39	35.59 ^s 329
	20.6 49.380 206	45.33 ^s 109	42.809 211	44.14 ^s 142	17.61 ^s 31	38.88 ^s 355
	30.6 49.586 159	44.24 ^s 82	43.020 165	42.72 ^s 117	17.92 ^s 23	42.43 ^s 371
Feb.	9.6 49.745 112	43.42 ^s 54	43.185 118	41.55 ^s 91	18.15 ^s 13	46.14 ^s 376
	19.5 49.857 63	42.88 ^s 27	43.303 70	40.64 ^s 64	18.28 ^s 5	49.90 ^s 372
	29.5 49.920 17	42.61 ^s 3	43.373 26	40.00 ^s 39	18.33 ^s 4	53.62 ^s 361
Mar.	10.5 49.937 24	42.58 ^s 18	43.399 15	39.61 ^s 15	18.29 ^s 12	57.23 ^s 339
	20.4 49.913 59	42.76 ^s 35	43.384 50	39.46 ^s 4	18.17 ^s 19	60.62 ^s 312
	30.4 49.854 87	43.11 ^s 49	43.334 78	39.50 ^s 23	17.98 ^s 25	63.74 ^s 280
Apr.	9.4 49.767 107	43.60 ^s 59	43.256 99	39.73 ^s 36	17.73 ^s 30	66.54 ^s 240
	19.4 49.660 121	44.19 ^s 65	43.157 113	40.09 ^s 47	17.43 ^s 34	68.94 ^s 197
	29.3 49.539 127	44.84 ^s 68	43.044 122	40.56 ^s 56	17.09 ^s 38	70.91 ^s 150
May	9.3 49.412 128	45.52 ^s 69	42.922 123	41.12 ^s 62	16.71 ^s 39	72.41 ^s 101
	19.3 49.284 123	46.21 ^s 67	42.799 121	41.74 ^s 66	16.32 ^s 41	73.42 ^s 49
	29.3 49.161 115	46.88 ^s 64	42.678 114	42.40 ^s 68	15.91 ^s 40	73.91 ^s 3
June	8.2 49.046 102	47.52 ^s 60	42.564 104	43.08 ^s 69	15.51 ^s 40	73.88 ^s 55
	18.2 48.944 88	48.12 ^s 53	42.460 92	43.77 ^s 68	15.11 ^s 37	73.33 ^s 104
	28.2 48.856 70	48.65 ^s 46	42.368 76	44.45 ^s 65	14.74 ^s 35	72.29 ^s 153
July	8.1 48.786 52	49.11 ^s 37	42.292 59	45.10 ^s 59	14.39 ^s 32	70.76 ^s 195
	18.1 48.734 31	49.48 ^s 27	42.233 40	45.69 ^s 53	14.07 ^s 26	68.81 ^s 233
	28.1 48.703 8	49.75 ^s 14	42.193 19	46.22 ^s 43	13.81 ^s 20	66.48 ^s 263
Aug.	7.1 48.695 16	49.89 ^s 0	42.174 6	46.65 ^s 31	13.61 ^s 14	63.85 ^s 285
	17.0 48.711 44	49.89 ^s 17	42.180 31	46.96 ^s 16	13.47 ^s 6	61.00 ^s 297
	27.0 48.755 72	49.72 ^s 35	42.211 60	47.12 ^s 2	13.41 ^s 2	58.03 ^s 300
Sept.	6.0 48.827 104	49.37 ^s 56	42.271 91	47.10 ^s 23	13.43 ^s 11	55.03 ^s 291
	16.0 48.931 136	48.81 ^s 78	42.362 125	46.87 ^s 47	13.54 ^s 19	52.12 ^s 271
	25.9 49.067 171	48.03 ^s 100	42.487 159	46.40 ^s 71	13.73 ^s 28	49.41 ^s 239
Oct.	5.9 49.238 205	47.03 ^s 123	42.646 195	45.69 ^s 98	14.01 ^s 36	47.02 ^s 199
	15.9 49.443 238	45.80 ^s 145	42.841 229	44.71 ^s 124	14.37 ^s 43	45.03 ^s 148
	25.8 49.681 270	44.35 ^s 163	43.070 261	43.47 ^s 147	14.80 ^s 50	43.55 ^s 92
Nov.	4.8 49.951 295	42.72 ^s 179	43.331 288	42.00 ^s 169	15.30 ^s 54	42.63 ^s 29
	14.8 50.246 315	40.93 ^s 189	43.619 310	40.31 ^s 185	15.84 ^s 58	42.34 ^s 35
	24.8 50.561 327	39.04 ^s 194	43.929 322	38.46 ^s 196	16.42 ^s 59	42.69 ^s 100
Dec.	4.7 50.888 328	37.10 ^s 192	44.251 325	36.50 ^s 202	17.01 ^s 57	43.69 ^s 161
	14.7 51.216 320	35.18 ^s 185	44.576 318	34.48 ^s 199	17.58 ^s 55	45.30 ^s 218
	24.7 51.536 301	33.33 ^s 169	44.894 301	32.49 ^s 192	18.13 ^s 50	47.48 ^s 268
	34.7 51.837	31.64 ^s	45.195	30.57 ^s	18.63 ^s	50.16 ^s
Mean Place	48.668	53.39	42.090	50.66	14.42	47.77
Sec δ , Tan δ	1.014	+0.171	1.002	+0.070	2.281	-2.050
L α , L δ	0.00	-0.4	0.00	-0.4	-0.02	-0.4
ω α , ω δ	+0.01	+0.4	+0.01	+0.3	-0.13	+0.3
AUTHORITY	A. N.				A. E.	

344 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	η Argûs. Mag. > 1-7.4		μ Argûs. Mag. 2.8		ι Leonis. Mag. 5.3	
	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. N.
	^h 10 ^m 42	[°] 59 ['] 16	^h 10 ^m 43	[°] 49 ['] 0	^h 10 ^m 45	[°] 10 ['] 56
Jan.	0.7 8.367 ⁴¹⁹ 10.6 8.786 ³⁵⁷ 20.6 9.143 ²⁸⁶ 30.6 9.429 ²⁰⁹	50.44 ²⁹⁴ 53.38 ³²⁷ 56.65 ³⁵³ 60.18 ³⁶⁴	31.036 ³⁵⁴ 31.390 ³⁰⁴ 31.694 ²⁴⁹ 31.943 ¹⁸⁶	54.55 ²⁹⁴ 57.49 ³²¹ 60.70 ³³⁸ 64.08 ³⁴⁶	15.962 ²⁹³ 16.255 ²⁶⁰ 16.515 ²²¹ 16.736 ¹⁷⁷	46.60 ¹⁵⁹ 45.01 ¹³⁵ 43.66 ¹⁰⁸ 42.58 ⁸⁰
Feb.	9.6 9.638 ¹³⁰ 19.5 9.768 ⁵³ 29.5 9.821 ²²	63.82 ³⁶⁸ 67.50 ³⁶³ 71.13 ³⁴⁹	32.129 ¹²³ 32.252 ⁶⁰ 32.312 ¹	67.54 ³⁴⁴ 70.98 ³³⁵ 74.33 ³¹⁸	16.913 ¹²⁸ 17.041 ⁸¹ 17.122 ³⁴	41.78 ⁵⁰ 41.28 ²² 41.06 ⁴
Mar.	10.5 9.799 ⁹⁰ 20.4 9.709 ¹⁵² 30.4 9.557 ²⁰⁴	74.62 ³²⁷ 77.89 ³⁰¹ 80.90 ²⁶⁶ 83.56 ²²⁸	32.311 ⁵⁵ 32.256 ¹⁰⁴ 32.152 ¹⁴⁴ 32.008 ¹⁷⁶	77.51 ²⁹⁵ 80.46 ²⁶⁵ 83.11 ²³² 85.43 ¹⁹⁵	17.156 ⁸ 17.148 ⁴⁴ 17.104 ⁷³ 17.031 ⁹⁶	41.10 ²⁵ 41.35 ⁴³ 41.78 ⁵⁷ 42.35 ⁶⁷
Apr.	9.4 9.353 ²⁴⁷ 19.4 9.106 ²⁸² 29.3 8.824 ³⁰⁸	85.84 ¹⁸⁵ 87.69 ¹⁴⁰ 89.09 ⁹¹ 90.00 ⁴¹ 90.41 ¹⁰	31.832 ²⁰⁴ 31.628 ²²¹ 31.407 ²³³ 31.174 ²³⁸ 30.936 ²³⁷	87.38 ¹⁵⁴ 88.92 ¹¹⁰ 90.02 ⁶⁵ 90.67 ¹⁹ 90.86 ²⁶	16.935 ¹¹² 16.823 ¹²¹ 16.702 ¹²⁵ 16.577 ¹²² 16.455 ¹¹⁷	43.02 ⁷² 43.74 ⁷⁴ 44.48 ⁷⁴ 45.22 ⁷¹ 45.93 ⁶⁷
May	9.3 8.516 ³²⁴ 19.3 8.192 ³³³ 29.3 7.859 ³³³	89.09 ⁹¹ 90.00 ⁴¹ 90.41 ¹⁰	30.699 ²²⁹ 30.470 ²¹⁶ 30.254 ¹⁹⁸ 30.056 ¹⁷³	90.02 ⁶⁵ 90.67 ¹⁹ 90.86 ²⁶	16.338 ¹⁰⁷ 16.231 ⁹⁴ 16.137 ⁸⁰ 16.057 ⁶³	46.60 ⁶⁰ 47.20 ⁵¹ 47.71 ⁴³ 48.14 ³²
June	8.2 7.526 ³²⁶ 18.2 7.200 ³⁰⁹ 28.2 6.891 ²⁸⁶	90.31 ⁶⁰ 89.71 ¹⁰⁷ 88.64 ¹⁵⁴ 87.10 ¹⁹⁴	30.699 ²²⁹ 30.470 ²¹⁶ 30.254 ¹⁹⁸ 30.056 ¹⁷³	90.60 ⁷¹ 89.89 ¹¹⁴ 88.75 ¹⁵⁴ 87.21 ¹⁸⁹	16.338 ¹⁰⁷ 16.231 ⁹⁴ 16.137 ⁸⁰ 16.057 ⁶³	46.60 ⁶⁰ 47.20 ⁵¹ 47.71 ⁴³ 48.14 ³²
July	8.1 6.605 ²⁵² 18.1 6.353 ²¹³ 28.1 6.140 ¹⁶⁴	87.10 ¹⁹⁴ 85.16 ²²⁹ 82.87 ²⁵⁹ 80.28 ²⁷⁸	30.056 ¹⁷³ 29.883 ¹⁴³ 29.740 ¹⁰⁷ 29.633 ⁶⁶	87.21 ¹⁸⁹ 85.32 ²¹⁹ 83.13 ²⁴² 80.71 ²⁵⁷	16.057 ⁶³ 15.994 ⁴⁴ 15.950 ²² 15.928 ²	48.14 ³² 48.46 ²⁰ 48.66 ⁶ 48.72 ⁹
Aug.	7.1 5.976 ¹⁰⁸ 17.0 5.868 ⁴⁶ 27.0 5.822 ²²	77.50 ²⁸⁹ 77.50 ²⁸⁹ 74.61 ²⁹⁰ 71.71 ²⁸⁰ 68.91 ²⁵⁸	29.567 ²⁰ 29.567 ²⁰ 29.547 ³² 29.579 ⁸⁶ 29.665 ¹⁴³	78.14 ²⁶⁴ 78.14 ²⁶⁴ 75.50 ²⁶⁰ 72.90 ²⁴⁸ 70.42 ²²⁵	15.930 ²⁷ 15.930 ²⁷ 15.957 ⁵⁷ 16.014 ⁸⁸ 16.102 ¹²¹	48.63 ²⁶ 48.63 ²⁶ 48.37 ⁴⁵ 47.92 ⁶⁶ 47.26 ⁸⁸
Sept.	6.0 5.844 ⁹⁵ 16.0 5.939 ¹⁶⁹ 25.9 6.108 ²⁴⁴	66.33 ²²⁸ 66.33 ²²⁸ 64.05 ¹⁸⁵ 62.20 ¹³⁶ 60.84 ⁸⁰	29.808 ²⁰⁰ 29.808 ²⁰⁰ 30.008 ²⁵⁷ 30.265 ³⁰⁸ 30.573 ³⁵⁴	68.17 ¹⁹² 68.17 ¹⁹² 66.25 ¹⁵¹ 64.74 ¹⁰² 63.72 ⁴⁷	16.223 ¹⁵⁶ 16.223 ¹⁵⁶ 16.379 ¹⁹² 16.571 ²²⁸ 16.799 ²⁶⁰	46.38 ¹¹⁰ 46.38 ¹¹⁰ 45.28 ¹³² 43.96 ¹⁵³ 42.43 ¹⁷¹
Oct.	5.9 6.352 ³¹⁵ 15.9 6.667 ³⁸⁰ 25.8 7.047 ⁴³⁵	60.04 ¹⁸ 60.04 ¹⁸ 64.05 ¹⁸⁵ 62.20 ¹³⁶ 60.84 ⁸⁰	30.927 ³⁹⁰ 30.927 ³⁹⁰ 30.008 ²⁵⁷ 30.265 ³⁰⁸ 30.573 ³⁵⁴	63.25 ¹¹ 63.25 ¹¹ 66.25 ¹⁵¹ 64.74 ¹⁰² 63.72 ⁴⁷	17.059 ²⁸⁹ 17.059 ²⁸⁹ 16.379 ¹⁹² 16.571 ²²⁸ 16.799 ²⁶⁰	40.72 ¹⁸⁶ 40.72 ¹⁸⁶ 45.28 ¹³² 43.96 ¹⁵³ 42.43 ¹⁷¹
Nov.	4.8 7.482 ⁴⁷⁹ 14.8 7.961 ⁵⁰⁷ 24.8 8.468 ⁵¹⁸	60.04 ¹⁸ 60.04 ¹⁸ 59.86 ⁴⁵ 60.31 ¹⁰⁸ 61.39 ¹⁶⁷	30.927 ³⁹⁰ 30.927 ³⁹⁰ 31.317 ⁴¹⁶ 31.733 ⁴²⁷ 32.160 ⁴²⁵	63.25 ¹¹ 63.25 ¹¹ 63.36 ⁷¹ 64.07 ¹²⁹ 65.36 ¹⁸³	17.059 ²⁸⁹ 17.059 ²⁸⁹ 17.348 ³¹¹ 17.659 ³²⁶ 17.985 ³³¹	40.72 ¹⁸⁶ 40.72 ¹⁸⁶ 38.86 ¹⁹⁵ 36.91 ²⁰⁰ 34.91 ¹⁹⁶
Dec.	4.7 8.986 ⁵¹³ 14.7 9.499 ⁴⁸⁹ 24.7 9.988 ⁴⁵⁰ 34.7 10.438	63.06 ²²³ 63.06 ²²³ 63.06 ²²³ 65.29 ²⁷⁰ 67.99	32.585 ⁴⁰⁹ 32.585 ⁴⁰⁹ 32.585 ⁴⁰⁹ 32.994 ³⁷⁸ 33.372	67.19 ²³² 67.19 ²³² 67.19 ²³² 69.51 ²⁷³ 72.24	18.316 ³²⁶ 18.316 ³²⁶ 18.316 ³²⁶ 18.642 ³¹⁰ 18.952	32.95 ¹⁸⁸ 32.95 ¹⁸⁸ 32.95 ¹⁸⁸ 31.07 ¹⁷² 29.35
Mean Place	6.489	64.90	29.781	67.04	15.878	51.55
Sec δ , Tan δ	1.958	-1.683	1.525	-1.151	1.019	+0.193
L α , L δ	-0.01	-0.4	-0.01	-0.4	0.00	-0.4
ω α , ω δ	-0.11	+0.3	-0.07	+0.3	+0.01	+0.3
AUTHORITY			A. E.		A. E.	

APPARENT PLACES OF STARS, 1924. 345

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	ν Hydræ. Mag. 3.3		ι Antliæ. Mag. 4.7		δ Leonis. Mag. 5.1		
	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. N.	
	^h 10 ^m 45 ^s	[°] 15 ['] 47 ["]	^h 10 ^m 53 ^s	[°] 36 ['] 43 ["]	^h 10 ^m 56 ^s	[°] 4 ['] 1 ["]	
Jan.	0.7 10.6 20.6 30.6	52.828 ²⁸⁵ 53.113 ²⁵³ 53.366 ²¹² 53.578 ¹⁶⁶	40.79 ²⁴³ 43.22 ²⁴³ 45.65 ²³⁵ 48.00 ²²³	11.126 ³²⁰ 11.446 ²⁸¹ 11.727 ²³⁴ 11.961 ¹⁸³	34.14 ²⁷⁹ 36.93 ²⁹⁸ 39.91 ³⁰⁷ 42.98 ³⁰⁸	38.264 ²⁹² 38.556 ²⁶³ 38.819 ²²⁵ 39.044 ¹⁸¹	30.60 ¹⁸⁷ 28.73 ¹⁶⁹ 27.04 ¹⁴⁶ 25.58 ¹²¹
Feb.	9.6 19.5 29.5	53.744 ¹²⁰ 53.864 ⁷¹ 53.935 ²⁷	50.23 ²⁰⁵ 52.28 ¹⁸² 54.10 ¹⁵⁹	12.144 ¹³⁰ 12.274 ⁷⁶ 12.350 ²⁵	46.06 ³⁰² 49.08 ²⁸⁹ 51.97 ²⁷⁰	39.225 ¹³⁶ 39.361 ⁸⁹ 39.450 ⁴⁴	24.37 ⁹⁴ 23.43 ⁶⁶ 22.77 ⁴¹
Mar.	10.5 20.5 30.4	53.962 ¹³ 53.949 ⁴⁹ 53.900 ⁷⁷	55.69 ¹³² 57.01 ¹⁰⁶ 58.07 ⁷⁹	12.375 ²¹ 12.354 ⁶² 12.292 ⁹⁷	54.67 ²⁴⁵ 57.12 ²¹⁷ 59.29 ¹⁸⁵	39.494 ² 39.496 ³² 39.464 ⁶²	22.36 ¹⁶ 22.20 ⁵ 22.25 ²³
Apr.	9.4 19.4 29.3	53.823 ¹⁰⁰ 53.723 ¹¹⁶ 53.607 ¹²⁴	58.86 ⁵³ 59.39 ²⁸ 59.67 ³	12.195 ¹²⁴ 12.071 ¹⁴⁵ 11.926 ¹⁶¹	61.14 ¹⁵² 62.66 ¹¹⁵ 63.81 ⁷⁹	39.402 ⁸⁵ 39.317 ¹⁰² 39.215 ¹¹³	22.48 ³⁷ 22.85 ⁴⁸ 23.33 ⁵⁸
May	9.3 19.3 29.3	53.483 ¹²⁹ 53.354 ¹³⁰ 53.224 ¹²⁵	59.70 ²¹ 59.49 ⁴³ 59.06 ⁶⁴	11.765 ¹⁶⁹ 11.596 ¹⁷³ 11.423 ¹⁷³	64.60 ⁴⁰ 65.00 ² 65.02 ³⁶	39.102 ¹¹⁷ 38.985 ¹¹⁸ 38.867 ¹¹³	23.91 ⁶³ 24.54 ⁶⁷ 25.21 ⁶⁹
June	8.2 18.2 28.2	53.099 ¹¹⁷ 52.982 ¹⁰⁷ 52.875 ⁹⁴	58.42 ⁸⁴ 57.58 ¹⁰⁰ 56.58 ¹¹⁵	11.250 ¹⁶⁷ 11.083 ¹⁵⁷ 10.926 ¹⁴⁴	64.66 ⁷² 63.94 ¹⁰⁷ 62.87 ¹³⁹	38.754 ¹⁰⁸ 38.646 ⁹⁷ 38.549 ⁸⁵	25.90 ⁶⁸ 26.58 ⁶⁷ 27.25 ⁶³
July	8.2 18.1 28.1	52.781 ⁷⁷ 52.704 ⁵⁹ 52.645 ³⁷	55.43 ¹²⁶ 54.17 ¹³³ 52.84 ¹³⁶	10.782 ¹²⁶ 10.656 ¹⁰⁴ 10.552 ⁷⁸	61.48 ¹⁶⁷ 59.81 ¹⁹⁰ 57.91 ²⁰⁶	38.464 ⁷⁰ 38.394 ⁵² 38.342 ³⁴	27.88 ⁵⁹ 28.47 ⁵¹ 28.98 ⁴⁰
Aug.	7.1 17.0 27.0	52.608 ¹² 52.596 ¹⁵ 52.611 ⁴⁶	51.48 ¹³⁴ 50.14 ¹²⁶ 48.88 ¹¹²	10.474 ⁴⁶ 10.428 ¹² 10.416 ²⁸	55.85 ²¹⁷ 53.68 ²¹⁹ 51.49 ²¹³	38.308 ¹¹ 38.297 ¹⁵ 38.312 ⁴²	29.38 ²⁹ 29.67 ¹³ 29.80 ⁵
Sept.	6.0 16.0 25.9	52.657 ⁸¹ 52.738 ¹¹⁶ 52.854 ¹⁵⁵	47.76 ⁹² 46.84 ⁶⁷ 46.17 ³⁶	10.444 ⁷² 10.516 ¹¹⁷ 10.633 ¹⁶⁴	49.36 ¹⁹⁸ 47.38 ¹⁷⁵ 45.63 ¹⁴⁴	38.354 ⁷⁴ 38.428 ¹⁰⁷ 38.535 ¹⁴³	29.75 ²⁵ 29.50 ⁴⁹ 29.01 ⁷⁴
Oct.	5.9 15.9 25.9	53.009 ¹⁹² 53.201 ²³⁰ 53.431 ²⁶³	45.81 ² 45.79 ³⁶ 46.15 ⁷⁵	10.797 ²¹² 11.009 ²⁵⁶ 11.265 ²⁹⁶	44.19 ¹⁰⁴ 43.15 ⁵⁹ 42.56 ¹⁰	38.678 ¹⁷⁹ 38.857 ²¹⁷ 39.074 ²⁵⁰	28.27 ¹⁰⁰ 27.27 ¹²⁵ 26.02 ¹⁴⁹
Nov.	4.8 14.8 24.8	53.694 ²⁹² 53.986 ³¹⁴ 54.300 ³²⁷	46.90 ¹¹⁴ 48.04 ¹⁴⁹ 49.53 ¹⁸²	11.561 ³³⁰ 11.891 ³⁵⁶ 12.247 ³⁶⁹	42.46 ⁴² 42.88 ⁹⁵ 43.83 ¹⁴⁵	39.324 ²⁸⁰ 39.604 ³⁰⁴ 39.908 ³²¹	24.53 ¹⁷¹ 22.82 ¹⁸⁸ 20.94 ¹⁹⁹
Dec.	4.7 14.7 24.7 34.7	54.627 ³³⁰ 54.957 ³²² 55.279 ³⁰³ 55.582 ³⁰³	51.35 ²⁰⁸ 53.43 ²²⁸ 55.71 ²⁴⁰ 58.11 ²⁴⁰	12.616 ³⁷² 12.988 ³⁶¹ 13.349 ³⁴⁰ 13.689 ³⁴⁰	45.28 ¹⁹¹ 47.19 ²³¹ 49.50 ²⁶³ 52.13 ²⁶³	40.229 ³²⁶ 40.555 ³²⁴ 40.879 ³⁰⁸ 41.187 ³⁰⁸	18.95 ²⁰⁵ 16.90 ²⁰³ 14.87 ¹⁹⁶ 12.91 ¹⁹⁶
Mean Place	52.436	44.26	10.363	44.21	38.173	32.97	
Sec δ , Tan δ	1.039	-0.283	1.248	-0.746	1.002	+0.070	
L α , L δ	0.00	-0.4	-0.01	-0.4	0.00	-0.4	
ω α , ω δ	-0.02	+0.3	-0.05	+0.3	0.00	+0.3	
AUTHORITY	A. N.		A. N.				

346 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	β Ursæ Majoris. Mag. 2.4		α Ursæ Majoris. Mag. 2.0		χ Leonis. Mag. 4.7	
	R.A.	Dec. N.	R.A.	Dec. N.	R.A.	Dec. N.
	^h 10	^m 57	^h 10	^m 59	^h 11	^m I
		^s 56° 46'		^s 62° 9'		^s 7° 44'
Jan. 0.7	15.696	479 68.48 11	2.77	54 25.10 27	5.905	296 47.01 175
10.7	16.175	434 68.59 64	3.31	50 25.37 84	6.201	268 45.26 155
20.6	16.609	375 69.23 116	3.81	43 26.21 136	6.469	230 43.71 129
30.6	16.984	303 70.39 161	4.24	34 27.57 183	6.699	187 42.42 102
Feb. 9.6	17.287	225 72.00 200	4.58	26 29.40 220	6.886	142 41.40 72
19.5	17.512	143 74.00 228	4.84	17 31.60 250	7.028	94 40.68 45
29.5	17.655	60 76.28 248	5.01	6 34.10 266	7.122	49 40.23 18
Mar. 10.5	17.715	18 78.76 255	5.07	3 36.76 273	7.171	8 40.05 6
20.5	17.697	89 81.31 252	5.04	11 39.49 268	7.179	29 40.11 26
30.4	17.608	151 83.83 240	4.93	18 42.17 252	7.150	60 40.37 43
Apr. 9.4	17.457	201 86.23 217	4.75	24 44.69 226	7.090	83 40.80 54
19.4	17.256	239 88.40 188	4.51	29 46.95 194	7.007	101 41.34 64
29.4	17.017	265 90.28 152	4.22	33 48.89 155	6.906	112 41.98 69
May 9.3	16.752	279 91.80 111	3.89	34 50.44 109	6.794	118 42.67 71
19.3	16.473	282 92.91 68	3.55	34 51.53 64	6.676	118 43.38 72
29.3	16.191	276 93.59 23	3.21	34 52.17 15	6.558	116 44.10 69
June 8.2	15.915	260 93.82 22	2.87	32 52.32 33	6.442	109 44.79 66
18.2	15.655	237 93.60 66	2.55	30 51.99 80	6.333	100 45.45 60
28.2	15.418	208 92.94 109	2.25	27 51.19 125	6.233	87 46.05 53
July 8.2	15.210	174 91.85 149	1.98	22 49.94 167	6.146	73 46.58 45
18.1	15.036	135 90.36 184	1.76	17 48.27 204	6.073	56 47.03 34
28.1	14.901	92 88.52 217	1.59	12 46.23 238	6.017	37 47.37 22
Aug. 7.1	14.809	46 86.35 246	1.47	7 43.85 267	5.980	14 47.59 7
17.1	14.763	3 83.89 269	1.40	1 41.18 291	5.966	11 47.66 9
27.0	14.766	56 81.20 288	1.39	5 38.27 308	5.977	38 47.57 28
Sept. 6.0	14.822	111 78.32 302	1.44	12 35.19 321	6.015	70 47.29 48
16.0	14.933	168 75.30 309	1.56	18 31.98 327	6.085	104 46.81 71
25.9	15.101	227 72.21 312	1.74	26 28.71 326	6.189	139 46.10 95
Oct. 5.9	15.328	286 69.09 307	2.00	32 25.45 320	6.328	176 45.15 119
15.9	15.614	343 66.02 296	2.32	39 22.25 304	6.504	213 43.96 143
25.9	15.957	397 63.06 276	2.71	44 19.21 283	6.717	248 42.53 163
Nov. 4.8	16.354	445 60.30 251	3.15	51 16.38 252	6.965	278 40.90 182
14.8	16.799	484 57.79 217	3.66	55 13.86 215	7.243	304 39.08 194
24.8	17.283	512 55.62 177	4.21	58 11.71 171	7.547	320 37.14 203
Dec. 4.8	17.795	525 53.85 130	4.79	60 10.00 121	7.867	328 35.11 204
14.7	18.320	523 52.55 79	5.39	60 8.79 66	8.195	326 33.07 199
24.7	18.843	505 51.76 25	5.99	57 8.13 9	8.521	312 31.08 186
34.7	19.348	51.51	6.56	57 8.04	8.833	312 29.22
Mean Place	16.056	84.48	3.20	41.86	5.876	50.42
Sec δ , Tan δ	1.826	+1.528	2.141	+1.894	1.009	+0.136
L a , L δ	+0.01	-0.4	+0.01	-0.4	0.00	-0.4
ω a , ω δ	+0.10	+0.3	+0.12	+0.3	+0.01	+0.3
AUTHORITY	A. E.		A. E.		A. E.	

APPARENT PLACES OF STARS, 1924. 347

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	ψ Ursæ Majoris. Mag. 3.2			β Crateris. Mag. 4.5			δ Leonis. Mag. 2.6						
	R.A.		Dec. N.	R.A.		Dec. S.	R.A.		Dec. N.				
	h	m	°	'	h	m	°	'	h	m	°	'	
	II	5	44	54	II	7	22	24	II	10	20	55	
	s		s		s		s		s		s		
Jan.	0.7	23.598	393	26.59	43	55.433	304	32.11	252	4.041	318	77.81	136
	10.7	23.991	359	26.16	6	55.737	273	34.63	259	4.359	290	76.45	102
	20.6	24.350	312	26.22	55	56.010	234	37.22	259	4.649	253	75.43	67
	30.6	24.662	256	26.77	99	56.244	190	39.81	253	4.902	208	74.76	32
Feb.	9.6	24.918	195	27.76	139	56.434	142	42.34	239	5.110	161	74.44	3
	19.5	25.113	131	29.15	170	56.576	95	44.73	220	5.271	112	74.47	35
	29.5	25.244	66	30.85	195	56.671	50	46.93	199	5.383	63	74.82	62
Mar.	10.5	25.310	6	32.80	209	56.721	7	48.92	175	5.446	17	75.44	84
	20.5	25.316	49	34.89	213	56.728	30	50.67	148	5.463	22	76.28	100
	30.4	25.267	97	37.02	210	56.698	61	52.15	120	5.441	56	77.28	110
Apr.	9.4	25.170	134	39.12	196	56.637	87	53.35	92	5.385	84	78.38	115
	19.4	25.036	164	41.08	177	56.550	106	54.27	63	5.301	104	79.53	114
	29.4	24.872	184	42.85	150	56.444	120	54.90	36	5.197	118	80.67	108
May	9.3	24.688	194	44.35	120	56.324	129	55.26	7	5.079	125	81.75	98
	19.3	24.494	198	45.55	85	56.195	133	55.33	20	4.954	128	82.73	86
	29.3	24.296	194	46.40	50	56.062	133	55.13	46	4.826	126	83.59	70
June	8.2	24.102	184	46.90	11	55.929	130	54.67	70	4.700	120	84.29	54
	18.2	23.918	168	47.01	26	55.799	123	53.97	94	4.580	110	84.83	36
	28.2	23.750	149	46.75	62	55.676	112	53.03	114	4.470	98	85.19	16
July	8.2	23.601	126	46.13	98	55.564	100	51.89	130	4.372	82	85.35	3
	18.1	23.475	98	45.15	131	55.464	83	50.59	144	4.290	65	85.32	23
	28.1	23.377	69	43.84	161	55.381	63	49.15	153	4.225	45	85.09	44
Aug.	7.1	23.308	35	42.23	190	55.318	38	47.62	154	4.180	22	84.65	65
	17.1	23.273	2	40.33	214	55.280	11	46.08	152	4.158	4	84.00	86
	27.0	23.275	40	38.19	236	55.269	21	44.56	143	4.162	33	83.14	107
Sept.	6.0	23.315	82	35.83	254	55.290	57	43.13	127	4.195	65	82.07	128
	16.0	23.397	127	33.29	267	55.347	96	41.86	104	4.260	100	80.79	149
	25.9	23.524	174	30.62	276	55.443	136	40.82	74	4.360	138	79.30	168
Oct.	5.9	23.698	222	27.86	281	55.579	178	40.08	40	4.498	176	77.62	186
	15.9	23.920	269	25.05	278	55.757	219	39.68	1	4.674	215	75.76	201
	25.9	24.189	314	22.27	269	55.976	257	39.67	40	4.889	253	73.75	211
Nov.	4.8	24.503	355	19.58	253	56.233	290	40.07	83	5.142	286	71.64	218
	14.8	24.858	389	17.05	231	56.523	316	40.90	124	5.428	314	69.46	219
	24.8	25.247	412	14.74	200	56.839	333	42.14	163	5.742	334	67.27	212
Dec.	4.8	25.659	426	12.74	164	57.172	340	43.77	196	6.076	344	65.15	199
	14.7	26.085	427	11.10	121	57.512	336	45.73	224	6.420	345	63.16	180
	24.7	26.512	413	9.89	75	57.848	320	47.97	243	6.765	334	61.36	155
	34.7	26.925		9.14		58.168		50.40		7.099		59.81	
Mean Place	23.920		40.25		55.063		38.83		4.185		85.05		
Sec δ , Tan δ	1.412		+0.997		1.082		-0.412		1.071		+0.383		
L α , L δ	+0.01		-0.4		0.00		-0.4		0.00		-0.4		
ω α , ω δ	+0.06		+0.2		-0.03		+0.2		+0.02		+0.2		
AUTHORITY	A. E.				A. E.				A. E.				

348 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	θ Leonis. Mag. 3.4		δ Crateris. Mag. 3.8		τ Leonis. Mag. 5.2	
	R.A.	Dec. N.	R.A.	Dec. S.	R.A.	Dec. N.
	^h ^m II IO	[°] ['] 15 50	^h ^m II 15	[°] ['] 14 21	^h ^m II 24	[°] ['] 3 16
Jan. 0.7	15.111 ^s 309	37.07 ^s 153	32.563 ^s 302	56.99 ^s 234	1.702 ^s 305	28.91 ^s 194
10.7	15.420 282	35.54 124	32.865 272	59.33 234	2.007 279	26.97 177
20.6	15.702 246	34.30 93	33.137 237	61.67 228	2.286 245	25.20 156
30.6	15.948 203	33.37 60	33.374 194	63.95 216	2.531 205	23.64 131
Feb. 9.6	16.151 156	32.77 26	33.568 150	66.11 198	2.736 161	22.33 102
19.5	16.307 108	32.51 4	33.718 104	68.09 176	2.897 116	21.31 75
29.5	16.415 61	32.55 31	33.822 59	69.85 154	3.013 72	20.56 47
Mar. 10.5	16.476 18	32.86 54	33.881 18	71.39 128	3.085 31	20.09 23
20.5	16.494 21	33.40 73	33.899 18	72.67 103	3.116 7	19.86 1
30.4	16.473 54	34.13 85	33.881 49	73.70 78	3.109 37	19.87 20
Apr. 9.4	16.419 79	34.98 93	33.832 73	74.48 53	3.072 63	20.07 35
19.4	16.340 99	35.91 96	33.759 94	75.01 29	3.009 83	20.42 47
29.4	16.241 113	36.87 94	33.665 106	75.30 7	2.926 97	20.89 58
May 9.3	16.128 120	37.81 89	33.559 116	75.37 15	2.829 106	21.47 64
19.3	16.008 122	38.70 82	33.443 120	75.22 34	2.723 111	22.11 68
29.3	15.886 120	39.52 72	33.323 121	74.88 54	2.612 111	22.79 69
June 8.2	15.766 114	40.24 60	33.202 118	74.34 71	2.501 109	23.48 70
18.2	15.652 106	40.84 46	33.084 113	73.63 86	2.392 104	24.18 68
28.2	15.546 94	41.30 31	32.971 104	72.77 100	2.288 96	24.86 65
July 8.2	15.452 80	41.61 16	32.867 91	71.77 110	2.192 84	25.51 58
18.1	15.372 63	41.77 1	32.776 78	70.67 116	2.108 71	26.09 52
28.1	15.309 44	41.76 18	32.698 59	69.51 120	2.037 55	26.61 42
Aug. 7.1	15.265 22	41.58 37	32.639 37	68.31 118	1.982 35	27.03 29
17.1	15.243 4	41.21 56	32.602 12	67.13 111	1.947 12	27.32 15
27.0	15.247 31	40.65 77	32.590 17	66.02 100	1.935 15	27.47 3
Sept. 6.0	15.278 63	39.88 99	32.607 51	65.02 82	1.950 46	27.44 24
16.0	15.341 98	38.89 119	32.658 87	64.20 59	1.996 80	27.20 46
25.9	15.439 134	37.70 141	32.745 125	63.61 32	2.076 116	26.74 71
Oct. 5.9	15.573 172	36.29 162	32.870 166	63.29 0	2.192 156	26.03 98
15.9	15.745 210	34.67 179	33.036 205	63.29 35	2.348 194	25.05 123
25.9	15.955 246	32.88 195	33.241 243	63.64 72	2.542 231	23.82 148
Nov. 4.8	16.201 280	30.93 205	33.484 276	64.36 109	2.773 265	22.34 170
14.8	16.481 307	28.88 211	33.760 303	65.45 143	3.038 294	20.64 189
24.8	16.788 326	26.77 210	34.063 322	66.88 173	3.332 314	18.75 202
Dec. 4.8	17.114 336	24.67 203	34.385 330	68.61 199	3.646 326	16.73 209
14.7	17.450 337	22.64 189	34.715 329	70.60 219	3.972 327	14.64 209
24.7	17.787 324	20.75 169	35.044 316	72.79 232	4.299 317	12.55 203
34.7	18.111	19.06	35.360	75.11	4.616	10.52
Mean Place	15.210	42.73	32.360	61.49	1.755	29.98
Sec δ , Tan δ	1.039	+0.284	1.032	-0.256	1.002	+0.057
L a , L δ	0.00	-0.4	0.00	-0.4	0.00	-0.4
ω a , ω δ	+0.02	+0.2	-0.02	+0.2	0.00	+0.2
AUTHORITY	A. E.		A. E.			

APPARENT PLACES OF STARS, 1924. 349

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	λ Draconis. Mag. 4.1		ξ Hydræ. Mag. 3.7		λ Centauri. Mag. 3.3	
	R.A.	Dec. N.	R.A.	Dec. S.	R.A.	Dec. S.
	^h ^m 11 26	[°] ['] 69 44	^h ^m 11 29	[°] ['] 31 26	^h ^m 11 32	[°] ['] 62 35
Jan.	0.7 53.81 ⁷³	45.28 ¹⁷	16.028 ³³¹	2.78 ²⁵²	17.46 ⁵²	38.78 ²⁴³
	10.7 54.54 ⁶⁸	45.45 ⁷⁸	16.359 ³⁰¹	5.30 ²⁷⁰	17.98 ⁴⁷	41.21 ²⁸⁶
	20.6 55.22 ⁶⁰	46.23 ¹³⁵	16.660 ²⁶³	8.00 ²⁷⁹	18.45 ⁴⁰	44.07 ³¹⁸
	30.6 55.82 ⁵⁰	47.58 ¹⁸⁸	16.923 ²¹⁸	10.79 ²⁸¹	18.85 ³³	47.25 ³⁴³
Feb.	9.6 56.32 ⁴⁰	49.46 ²³¹	17.141 ¹⁶⁹	13.60 ²⁷⁶	19.18 ²⁵	50.68 ³⁵⁹
	19.6 56.72 ²⁷	51.77 ²⁶⁴	17.310 ¹²²	16.36 ²⁶⁴	19.43 ¹⁷	54.27 ³⁶⁴
	29.5 56.99 ¹⁵	54.41 ²⁸⁷	17.432 ⁷³	19.00 ²⁴⁶	19.60 ⁹	57.91 ³⁶¹
Mar.	10.5 57.14 ³	57.28 ²⁹⁷	17.505 ²⁸	21.46 ²²⁶	19.69 ¹	61.52 ³⁵¹
	20.5 57.17 ⁹	60.25 ²⁹⁴	17.533 ¹²	23.72 ²⁰¹	19.70 ⁶	65.03 ³³²
	30.4 57.08 ²⁰	63.19 ²⁸¹	17.521 ⁴⁷	25.73 ¹⁷³	19.64 ¹²	68.35 ³⁰⁸
Apr.	9.4 56.88 ²⁹	66.00 ²⁵⁷	17.474 ⁷⁷	27.46 ¹⁴⁴	19.52 ¹⁹	71.43 ²⁷⁶
	19.4 56.59 ³⁷	68.57 ²²⁴	17.397 ¹⁰¹	28.90 ¹¹³	19.33 ²³	74.19 ²⁴¹
	29.4 56.22 ⁴³	70.81 ¹⁸³	17.296 ¹²⁰	30.03 ⁸¹	19.10 ²⁷	76.60 ²⁰¹
May	9.3 55.79 ⁴⁷	72.64 ¹³⁷	17.176 ¹³³	30.84 ⁴⁸	18.83 ³¹	78.61 ¹⁵⁶
	19.3 55.32 ⁴⁸	74.01 ⁸⁸	17.043 ¹⁴³	31.32 ¹⁶	18.52 ³⁴	80.17 ¹⁰⁸
	29.3 54.84 ⁵⁰	74.89 ³⁵	16.900 ¹⁴⁸	31.48 ¹⁶	18.18 ³⁶	81.25 ⁶⁰
June	8.3 54.34 ⁴⁸	75.24 ¹⁸	16.752 ¹⁴⁹	31.32 ⁴⁹	17.82 ³⁶	81.85 ⁹
	18.2 53.86 ⁴⁷	75.06 ⁶⁹	16.603 ¹⁴⁷	30.83 ⁷⁹	17.46 ³⁶	81.94 ⁴²
	28.2 53.39 ⁴³	74.37 ¹¹⁹	16.456 ¹⁴⁰	30.04 ¹⁰⁷	17.10 ³⁶	81.52 ⁹¹
July	8.2 52.96 ³⁸	73.18 ¹⁶⁶	16.316 ¹³⁰	28.97 ¹³³	16.74 ³³	80.61 ¹³⁸
	18.1 52.58 ³²	71.52 ²¹⁰	16.186 ¹¹⁴	27.64 ¹⁵³	16.41 ³¹	79.23 ¹⁸⁰
	28.1 52.26 ²⁷	69.42 ²⁴⁷	16.072 ⁹⁶	26.11 ¹⁷¹	16.10 ²⁶	77.43 ²¹⁸
Aug.	7.1 51.99 ¹⁹	66.95 ²⁸¹	15.976 ⁷¹	24.40 ¹⁸⁰	15.84 ²²	75.25 ²⁴⁷
	17.1 51.80 ¹¹	64.14 ³⁰⁹	15.905 ⁴³	22.60 ¹⁸⁶	15.62 ¹⁵	72.78 ²⁷¹
	27.0 51.69 ³	61.05 ³³¹	15.862 ⁸	20.74 ¹⁸²	15.47 ⁸	70.07 ²⁸⁴
Sept.	6.0 51.66 ⁵	57.74 ³⁴⁶	15.854 ³¹	18.92 ¹⁷¹	15.39 ⁰	67.23 ²⁸⁶
	16.0 51.71 ¹⁵	54.28 ³⁵⁴	15.885 ⁷³	17.21 ¹⁵³	15.39 ⁸	64.37 ²⁷⁹
	26.0 51.86 ²⁴	50.74 ³⁵⁵	15.958 ¹²⁰	15.68 ¹²⁶	15.47 ¹⁷	61.58 ²⁵⁹
Oct.	5.9 52.10 ³⁴	47.19 ³⁴⁹	16.078 ¹⁶⁷	14.42 ⁹⁴	15.64 ²⁶	58.99 ²²⁹
	15.9 52.44 ⁴³	43.70 ³³⁵	16.245 ²¹²	13.48 ⁵⁴	15.90 ³⁴	56.70 ¹⁸⁸
	25.9 52.87 ⁵¹	40.35 ³¹²	16.457 ²⁵⁶	12.94 ¹¹	16.24 ⁴²	54.82 ¹⁴⁰
Nov.	4.8 53.38 ⁶⁰	37.23 ²⁸¹	16.713 ²⁹⁶	12.83 ³⁶	16.66 ⁴⁸	53.42 ⁸⁴
	14.8 53.98 ⁶⁷	34.42 ²⁴¹	17.009 ³²⁶	13.19 ⁸³	17.14 ⁵³	52.58 ²⁵
	24.8 54.65 ⁷²	32.01 ¹⁹⁶	17.335 ³⁴⁹	14.02 ¹²⁹	17.67 ⁵⁶	52.33 ³⁹
Dec.	4.8 55.37 ⁷⁶	30.05 ¹⁴²	17.684 ³⁵⁹	15.31 ¹⁷¹	18.23 ⁵⁷	52.72 ¹⁰⁰
	14.7 56.13 ⁷⁷	28.63 ⁸⁴	18.043 ³⁵⁸	17.02 ²⁰⁸	18.80 ⁵⁷	53.72 ¹⁵⁹
	24.7 56.90 ⁷⁶	27.79 ²³	18.401 ³⁴⁶	19.10 ²³⁸	19.37 ⁵⁵	55.31 ²¹⁴
	34.7 57.66	27.56	18.747	21.48	19.92	57.45
Mean Place	54.76	62.57	15.634	13.44	15.91	57.34
Sec δ , Tan δ	2.889	+2.711	1.172	-0.611	2.173	-1.929
L α , L δ	+0.01	-0.4	0.00	-0.4	-0.01	-0.4
ω α , ω δ	+0.18	+0.1	-0.04	+0.1	-0.13	+0.1
AUTHORITY	A. E.		A. E.		A. E.	

350 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	ν Leonis. Mag. 4.5		ν Virginis. Mag. 4.2		β Leonis. Mag. 2.2	
	R.A.	Dec. S.	R.A.	Dec. N.	R.A.	Dec. N.
	^h 11 33	^m 0 24	^h 11 41	^m 6 56	^h 11 45	^m 14 59
Jan.	0.7 3.377 ³⁰⁷	13.86 ²⁰⁴	57.033 ³¹³	77.71 ¹⁹⁰	10.796 ³²⁰	44.85 ¹⁷⁰
	10.7 3.684 ²⁸²	15.90 ¹⁹¹	57.346 ²⁹⁰	75.81 ¹⁶⁹	11.116 ²⁹⁹	43.15 ¹⁴³
	20.7 3.966 ²⁵⁰	17.81 ¹⁷³	57.636 ²⁶⁰	74.12 ¹⁴⁴	11.415 ²⁶⁸	41.72 ¹¹¹
	30.6 4.216 ²¹¹	19.54 ¹⁵⁰	57.896 ²²¹	72.68 ¹¹⁶	11.683 ²²⁹	40.61 ⁷⁶
Feb.	9.6 4.427 ¹⁶⁸	21.04 ¹²⁴	58.117 ¹⁷⁹	71.52 ⁸⁶	11.912 ¹⁸⁷	39.85 ⁴²
	19.6 4.595 ¹²⁴	22.28 ⁹⁸	58.296 ¹³⁵	70.66 ⁵⁵	12.099 ¹⁴²	39.43 ⁹
	29.6 4.719 ⁸¹	23.26 ⁷¹	58.431 ⁹¹	70.11 ²⁷	12.241 ⁹⁶	39.34 ²²
Mar.	10.5 4.800 ³⁹	23.97 ⁴⁵	58.522 ⁵⁰	69.84 ⁰	12.337 ⁵⁴	39.56 ⁴⁸
	20.5 4.839 ³	24.42 ²²	58.572 ¹¹	69.84 ²¹	12.391 ¹³	40.04 ⁷⁰
	30.5 4.842 ²⁸	24.64 ¹	58.583 ²¹	70.05 ⁴¹	12.404 ²¹	40.74 ⁸⁵
Apr.	9.4 4.814 ⁵⁵	24.65 ¹⁷	58.562 ⁴⁹	70.46 ⁵⁵	12.383 ⁵⁰	41.59 ⁹⁷
	19.4 4.759 ⁷⁶	24.48 ³³	58.513 ⁷⁰	71.01 ⁶⁶	12.333 ⁷⁴	42.56 ¹⁰²
	29.4 4.683 ⁹¹	24.15 ⁴⁴	58.443 ⁸⁷	71.67 ⁷³	12.259 ⁹¹	43.58 ¹⁰³
May	9.4 4.592 ¹⁰¹	23.71 ⁵⁴	58.356 ⁹⁹	72.40 ⁷⁶	12.168 ¹⁰⁴	44.61 ¹⁰⁰
	19.3 4.491 ¹⁰⁸	23.17 ⁶¹	58.257 ¹⁰⁶	73.16 ⁷⁶	12.064 ¹¹²	45.61 ⁹³
	29.3 4.383 ¹¹⁰	22.56 ⁶⁷	58.151 ¹⁰⁹	73.92 ⁷⁵	11.952 ¹¹⁶	46.54 ⁸³
June	8.3 4.273 ¹⁰⁹	21.89 ⁷⁰	58.042 ¹¹⁰	74.67 ⁷¹	11.836 ¹¹⁶	47.37 ⁷¹
	18.3 4.164 ¹⁰⁶	21.19 ⁷²	57.932 ¹⁰⁸	75.38 ⁶⁵	11.720 ¹¹³	48.08 ⁵⁸
	28.2 4.058 ⁹⁹	20.47 ⁷¹	57.824 ¹⁰¹	76.03 ⁵⁷	11.607 ¹⁰⁸	48.66 ⁴²
July	8.2 3.959 ⁹⁰	19.76 ⁶⁹	57.723 ⁹⁴	76.60 ⁴⁸	11.499 ⁹⁸	49.08 ²⁵
	18.2 3.869 ⁷⁷	19.07 ⁶⁴	57.629 ⁸¹	77.08 ³⁷	11.401 ⁸⁸	49.33 ⁸
	28.2 3.792 ⁶²	18.43 ⁵⁷	57.548 ⁶⁸	77.45 ²⁴	11.313 ⁷¹	49.41 ¹⁰
Aug.	7.1 3.730 ⁴⁴	17.86 ⁴⁷	57.480 ⁴⁹	77.69 ⁹	11.242 ⁵⁴	49.31 ³¹
	17.1 3.686 ²¹	17.39 ³⁴	57.431 ²⁸	77.78 ⁷	11.188 ³¹	49.00 ⁵¹
	27.1 3.665 ⁶	17.05 ¹⁷	57.403 ¹	77.71 ²⁶	11.157 ⁶	48.49 ⁷³
Sept.	6.0 3.671 ³⁶	16.88 ²	57.402 ²⁸	77.45 ⁴⁸	11.151 ²⁵	47.76 ⁹⁵
	16.0 3.707 ⁷¹	16.90 ²⁴	57.430 ⁶²	76.97 ⁷⁰	11.176 ⁵⁹	46.81 ¹¹⁸
	26.0 3.778 ¹⁰⁷	17.14 ⁵⁰	57.492 ⁹⁹	76.27 ⁹⁴	11.235 ⁹⁷	45.63 ¹⁴¹
Oct.	6.0 3.885 ¹⁴⁷	17.64 ⁷⁷	57.591 ¹³⁸	75.33 ¹¹⁹	11.332 ¹³⁶	44.22 ¹⁶³
	15.9 4.032 ¹⁸⁶	18.41 ¹⁰⁵	57.729 ¹⁷⁹	74.14 ¹⁴²	11.468 ¹⁷⁸	42.59 ¹⁸³
	25.9 4.218 ²²⁵	19.46 ¹³¹	57.908 ²¹⁸	72.72 ¹⁶⁶	11.646 ²¹⁸	40.76 ²⁰⁰
Nov.	4.9 4.443 ²⁵⁹	20.77 ¹⁵⁸	58.126 ²⁵⁵	71.06 ¹⁸⁵	11.864 ²⁵⁵	38.76 ²¹⁴
	14.8 4.702 ²⁹⁰	22.35 ¹⁷⁹	58.381 ²⁸⁵	69.21 ²⁰¹	12.119 ²⁸⁸	36.62 ²²⁰
	24.8 4.992 ³¹¹	24.14 ¹⁹⁶	58.666 ³¹¹	67.20 ²¹⁰	12.407 ³¹³	34.42 ²²³
Dec.	4.8 5.303 ³²⁴	26.10 ²⁰⁸	58.977 ³²⁵	65.10 ²¹⁴	12.720 ³³⁰	32.19 ²¹⁸
	14.8 5.627 ³²⁷	28.18 ²¹²	59.302 ³³⁰	62.96 ²¹⁰	13.050 ³³⁶	30.01 ²⁰⁶
	24.7 5.954 ³¹⁸	30.30 ²¹⁰	59.632 ³²⁴	60.86 ²⁰⁰	13.386 ³³¹	27.95 ¹⁸⁷
	34.7 6.272	32.40	59.956	58.86	13.717	26.08
Mean Place	3.443	14.40	57.225	79.35	11.087	49.08
Sec δ , Tan δ	1.000	-0.007	1.007	+0.122	1.035	+0.268
L α , L δ	0.00	-0.4	0.00	-0.4	0.00	-0.4
ω α , ω δ	0.00	+0.1	+0.01	+0.1	+0.02	+0.1
AUTHORITY	A. E.				A. E.	

APPARENT PLACES OF STARS, 1924. 351

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	β Virginis. Mag. 3.8		B Centauri. Mag. 4.7		γ Ursæ Majoris. Mag. 2.5	
	R.A.	Dec. N.	R.A.	Dec. S.	R.A.	Dec. N.
	^h 11 ^m 46	[°] 2 ['] 11	^h 11 ^m 47	[°] 44 ['] 44	^h 11 ^m 49	[°] 54 ['] 6
Jan.	0.7 44.016 ³¹²	35.34 ²⁰¹	20.793 ³⁸⁵	47.51 ²⁴⁰	49.716 ⁴⁷⁷	47.73 ⁶¹
	10.7 44.328 ²⁹²	33.33 ¹⁸⁵	21.178 ³⁵⁴	49.91 ²⁷²	50.193 ⁴⁵⁰	47.12 ⁴
	20.7 44.620 ²⁶¹	31.48 ¹⁶⁵	21.532 ³¹³	52.63 ²⁹⁴	50.643 ⁴⁰⁸	47.08 ⁵³
	30.6 44.881 ²²⁴	29.83 ¹⁴⁰	21.845 ²⁶⁴	55.57 ³⁰⁹	51.051 ³⁵³	47.61 ¹⁰⁷
Feb.	9.6 45.105 ¹⁸³	28.43 ¹¹³	22.109 ²¹¹	58.66 ³¹⁴	51.404 ²⁸⁸	48.68 ¹⁵⁵
	19.6 45.288 ¹⁴⁰	27.30 ⁸⁵	22.320 ¹⁵⁶	61.80 ³¹³	51.692 ²¹⁸	50.23 ¹⁹⁶
	29.6 45.428 ⁹⁶	26.45 ⁵⁶	22.476 ¹⁰²	64.93 ³⁰⁵	51.910 ¹⁴⁴	52.19 ²²⁶
Mar.	10.5 45.524 ⁵⁵	25.89 ³¹	22.578 ⁵⁰	67.98 ²⁸⁸	52.054 ⁷¹	54.45 ²⁴⁹
	20.5 45.579 ¹⁸	25.58 ⁷	22.628 ²	70.86 ²⁶⁹	52.125 ²	56.94 ²⁵⁸
	30.5 45.597 ¹⁴	25.51 ¹³	22.630 ⁴⁰	73.55 ²⁴⁴	52.127 ⁶²	59.52 ²⁵⁸
Apr.	9.4 45.583 ⁴²	25.64 ³⁰	22.590 ⁷⁹	75.99 ²¹⁴	52.065 ¹¹⁶	62.10 ²⁴⁷
	19.4 45.541 ⁶⁴	25.94 ⁴⁴	22.511 ¹¹¹	78.13 ¹⁸²	51.949 ¹⁶³	64.57 ²²⁷
	29.4 45.477 ⁸¹	26.38 ⁵⁵	22.400 ¹³⁷	79.95 ¹⁴⁷	51.786 ¹⁹⁹	66.84 ²⁰⁰
May	9.4 45.396 ⁹³	26.93 ⁶²	22.263 ¹⁶⁰	81.42 ¹¹⁰	51.587 ²²⁵	68.84 ¹⁶⁵
	19.3 45.303 ¹⁰¹	27.55 ⁶⁷	22.103 ¹⁷⁶	82.52 ⁷⁰	51.362 ²⁴²	70.49 ¹²⁶
	29.3 45.202 ¹⁰⁶	28.22 ⁶⁹	21.927 ¹⁸⁹	83.22 ²⁹	51.120 ²⁵¹	71.75 ⁸⁴
June	8.3 45.096 ¹⁰⁸	28.91 ⁷⁰	21.738 ¹⁹⁵	83.51 ¹¹	50.869 ²⁵²	72.59 ³⁹
	18.3 44.988 ¹⁰⁵	29.61 ⁶⁹	21.543 ¹⁹⁸	83.40 ⁵¹	50.617 ²⁴⁵	72.98 ⁶
	28.2 44.883 ¹⁰¹	30.30 ⁶⁵	21.345 ¹⁹⁵	82.89 ⁹⁰	50.372 ²³²	72.92 ⁵⁰
July	8.2 44.782 ⁹¹	30.95 ⁶⁰	21.150 ¹⁸⁷	81.99 ¹²⁶	50.140 ²¹²	72.42 ⁹⁶
	18.2 44.688 ⁸⁴	31.55 ⁵³	20.963 ¹⁷²	80.73 ¹⁵⁹	49.928 ¹⁸⁸	71.46 ¹³⁶
	28.2 44.604 ⁷⁰	32.08 ⁴⁴	20.791 ¹⁵¹	79.14 ¹⁸⁶	49.740 ¹⁵⁸	70.10 ¹⁷⁶
Aug.	7.1 44.534 ⁵²	32.52 ³²	20.640 ¹²⁴	77.28 ²⁰⁸	49.582 ¹²³	68.34 ²¹¹
	17.1 44.482 ³¹	32.84 ¹⁸	20.516 ⁸⁹	75.20 ²²⁴	49.459 ⁸⁴	66.23 ²⁴⁴
	27.1 44.451 ⁵	33.02 ¹	20.427 ⁴⁸	72.96 ²²⁹	49.375 ³⁹	63.79 ²⁷¹
Sept.	6.0 44.446 ²⁵	33.03 ¹⁹	20.379 ⁰	70.67 ²²⁸	49.336 ¹¹	61.08 ²⁹⁴
	16.0 44.471 ⁵⁸	32.84 ⁴³	20.379 ⁵²	68.39 ²¹⁶	49.347 ⁶⁴	58.14 ³¹²
	26.0 44.529 ⁹⁵	32.41 ⁶⁷	20.431 ¹⁰⁹	66.23 ¹⁹⁵	49.411 ¹²¹	55.02 ³²³
Oct.	6.0 44.624 ¹³⁵	31.74 ⁹²	20.540 ¹⁶⁷	64.28 ¹⁶⁵	49.532 ¹⁸¹	51.79 ³²⁹
	15.9 44.759 ¹⁷⁶	30.82 ¹¹⁸	20.707 ²²⁵	62.63 ¹²⁷	49.713 ²⁴²	48.50 ³²⁷
	25.9 44.935 ²¹⁵	29.64 ¹⁴⁴	20.932 ²⁷⁹	61.36 ⁸²	49.955 ³⁰²	45.23 ³¹⁹
Nov.	4.9 45.150 ²⁵²	28.20 ¹⁶⁸	21.211 ³²⁷	60.54 ³²	50.257 ³⁵⁸	42.04 ³⁰⁰
	14.8 45.402 ²⁸⁴	26.52 ¹⁸⁸	21.538 ³⁶⁶	60.22 ²²	50.615 ⁴⁰⁸	39.04 ²⁷⁵
	24.8 45.686 ³⁰⁸	24.64 ²⁰²	21.904 ³⁹⁵	60.44 ⁷⁵	51.023 ⁴⁴⁸	36.29 ²⁴¹
Dec.	4.8 45.994 ³²⁴	22.62 ²¹¹	22.299 ⁴¹⁰	61.19 ¹²⁷	51.471 ⁴⁷⁷	33.88 ²⁰⁰
	14.8 46.318 ³²⁹	20.51 ²¹³	22.709 ⁴¹¹	62.46 ¹⁷⁶	51.948 ⁴⁹²	31.88 ¹⁵¹
	24.7 46.647 ³²⁴	18.38 ²⁰⁸	23.120 ⁴⁰⁰	64.22 ²¹⁸	52.440 ⁴⁹⁰	30.37 ⁹⁷
	34.7 46.971	16.30	23.520	66.40	52.930	29.40
Mean Place	44.187	35.16	20.228	62.91	50.527	62.33
Sec δ , Tan δ	1.001	+0.038	1.408	-0.991	1.706	+1.382
L α , L δ	0.00	-0.4	0.00	-0.4	0.00	-0.4
ω α , ω δ	0.00	+0.1	-0.07	+0.1	+0.09	0.0
AUTHORITY	A. E.		A. N.		A. E.	

352 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	π Virginis. Mag. 4.6		σ Virginis. Mag. 4.2		δ Centauri. Mag. 2.9	
	R.A.	Dec. N.	R.A.	Dec. N.	R.A.	Dec. S.
	^h 11 ^m 56	[°] 7 ['] 1	^h 12 ^m 1	[°] 9 ['] 8	^h 12 ^m 4	[°] 50 ['] 17
Jan.	0.7 58.419 ³¹⁸ 10.7 58.737 ²⁹⁷ 20.7 59.034 ²⁶⁹ 30.6 59.303 ²³³	76.09 ¹⁹³ 74.16 ¹⁷² 72.44 ¹⁴⁷ 70.97 ¹¹⁹	19.979 ³²⁰ 20.299 ³⁰⁰ 20.599 ²⁷³ 20.872 ²³⁷	76.18 ¹⁸⁹ 74.29 ¹⁶⁷ 72.62 ¹⁴⁰ 71.22 ¹¹⁰	25.232 ⁴²⁹ 25.661 ³⁹⁸ 26.059 ³⁵⁶ 26.415 ³⁰⁷	39.99 ²²⁰ 42.19 ²⁵⁸ 44.77 ²⁸⁸ 47.65 ³⁰⁸
Feb.	9.6 59.536 ¹⁹² 19.6 59.728 ¹⁴⁹ 29.6 59.877 ¹⁰⁶	69.78 ⁸⁷ 68.91 ⁵⁷ 68.34 ²⁸	21.109 ¹⁹⁷ 21.306 ¹⁵⁴ 21.460 ¹¹¹	70.12 ⁷⁷ 69.35 ⁴⁶ 68.89 ¹⁵	26.722 ²⁵² 26.974 ¹⁹⁴ 27.168 ¹³⁶	50.73 ³²⁰ 53.93 ³²⁴ 57.17 ³²¹
Mar.	10.5 59.983 ⁶⁵ 20.5 60.048 ²⁷ 30.5 60.075 ⁶	68.06 ⁰ 68.06 ²³ 68.29 ⁴²	21.571 ⁷⁰ 21.641 ³⁰ 21.671 ³	68.74 ¹³ 68.87 ³⁶ 69.23 ⁵⁵	27.304 ⁷⁹ 27.383 ²⁵ 27.408 ²²	60.38 ³¹¹ 63.49 ²⁹⁵ 66.44 ²⁷³
Apr.	9.4 60.069 ³⁶ 19.4 60.033 ⁵⁹ 29.4 59.974 ⁷⁶	68.71 ⁵⁸ 69.29 ⁷⁰ 69.99 ⁷⁵	21.668 ³² 21.636 ⁵⁷ 21.579 ⁷⁵	69.78 ⁷⁰ 70.48 ⁸⁰ 71.28 ⁸⁵	27.386 ⁶⁷ 27.319 ¹⁰⁵ 27.214 ¹³⁹	69.17 ²⁴⁶ 71.63 ²¹⁵ 73.78 ¹⁸¹
May	9.4 59.898 ⁹¹ 19.3 59.807 ¹⁰⁰ 29.3 59.707 ¹⁰⁶	70.74 ⁸¹ 71.55 ⁷⁹ 72.34 ⁷⁸	21.504 ⁹⁰ 21.414 ¹⁰⁰ 21.314 ¹⁰⁷	72.13 ⁸⁸ 73.01 ⁸⁶ 73.87 ⁸²	27.075 ¹⁶⁷ 26.908 ¹⁹¹ 26.717 ²⁰⁹	75.59 ¹⁴³ 77.02 ¹⁰³ 78.05 ⁶²
June	8.3 59.601 ¹⁰⁹ 18.3 59.492 ¹⁰⁸ 28.2 59.384 ¹⁰⁶	73.12 ⁷⁴ 73.86 ⁶⁶ 74.52 ⁵⁹	21.207 ¹¹⁰ 21.097 ¹¹⁰ 20.987 ¹⁰⁸	74.69 ⁷⁶ 75.45 ⁶⁷ 76.12 ⁵⁶	26.508 ²²² 26.286 ²³⁰ 26.056 ²³⁰	78.67 ¹⁸ 78.85 ²⁵ 78.60 ⁶⁸
July	8.2 59.278 ¹⁰⁰ 18.2 59.178 ⁹⁰ 28.2 59.088 ⁷⁸	75.11 ⁴⁹ 75.60 ³⁸ 75.98 ²⁴	20.879 ¹⁰² 20.777 ⁹³ 20.684 ⁸²	76.68 ⁴⁴ 77.12 ³¹ 77.43 ¹⁷	25.826 ²²⁶ 25.600 ²¹² 25.388 ¹⁹³	77.92 ¹⁰⁹ 76.83 ¹⁴⁶ 75.37 ¹⁷⁹
Aug.	7.1 59.010 ⁶¹ 17.1 58.949 ⁴¹ 27.1 58.908 ¹⁷	76.22 ¹⁰ 76.32 ⁸ 76.24 ²⁷	20.602 ⁶⁵ 20.537 ⁴⁵ 20.492 ²⁰	77.60 ¹ 77.59 ¹⁹ 77.40 ³⁹	25.195 ¹⁶⁴ 25.031 ¹²⁸ 24.903 ⁸³	73.58 ²⁰⁶ 71.52 ²²⁸ 69.24 ²⁴⁰
Sept.	6.0 58.891 ¹⁴ 16.0 58.905 ⁴⁶ 26.0 58.951 ⁸⁴	75.97 ⁴⁸ 75.49 ⁷¹ 74.78 ⁹⁵	20.472 ⁸ 20.480 ⁴² 20.522 ⁸⁰	77.01 ⁶⁰ 76.41 ⁸⁴ 75.57 ¹⁰⁷	24.820 ³¹ 24.789 ²⁷ 24.816 ⁹¹	66.84 ²⁴³ 64.41 ²³⁸ 62.03 ²²¹
Oct.	6.0 59.035 ¹²⁴ 15.9 59.159 ¹⁶⁵ 25.9 59.324 ²⁰⁶	73.83 ¹¹⁹ 72.64 ¹⁴⁴ 71.20 ¹⁶⁷	20.602 ¹¹⁹ 20.721 ¹⁶¹ 20.882 ²⁰²	74.50 ¹³² 73.18 ¹⁵⁵ 71.63 ¹⁷⁷	24.907 ¹⁵⁶ 25.063 ²²² 25.285 ²⁸⁴	59.82 ¹⁹⁷ 57.85 ¹⁶¹ 56.24 ¹¹⁹
Nov.	4.9 59.530 ²⁴⁴ 14.8 59.774 ²⁷⁸ 24.8 60.052 ³⁰⁴	69.53 ¹⁸⁶ 67.67 ²⁰² 65.65 ²¹²	21.084 ²⁴² 21.326 ²⁷⁵ 21.601 ³⁰³	69.86 ¹⁹⁵ 67.91 ²⁰⁸ 65.83 ²¹⁷	25.569 ³⁴⁰ 25.909 ³⁸⁷ 26.296 ⁴²²	55.05 ⁶⁹ 54.36 ¹⁶ 54.20 ³⁹
Dec.	4.8 60.356 ³²³ 14.8 60.679 ³²⁹ 24.7 61.008 ³²⁷ 34.7 61.335 ³²⁷	63.53 ²¹⁶ 61.37 ²¹³ 59.24 ²⁰³ 57.21 ²⁰³	21.904 ³²¹ 22.225 ³³¹ 22.556 ³²⁸ 22.884 ³²⁸	63.66 ²¹⁹ 61.47 ²¹³ 59.34 ²⁰² 57.32 ²⁰²	26.718 ⁴⁴³ 27.161 ⁴⁴⁹ 27.610 ⁴⁴¹ 28.051 ⁴⁴¹	54.59 ⁹⁵ 55.54 ¹⁴⁷ 57.01 ¹⁹⁵ 58.96 ¹⁹⁵
Mean Place	58.699	77.20	20.306	77.86	24.668	57.69
Sec δ , Tan δ	1.008	+0.123	1.013	+0.161	1.566	-1.204
L α , L δ	0.00	-0.4	0.00	-0.4	0.00	-0.4
ω α , ω δ	+0.01	0.0	+0.01	0.0	-0.08	0.0
AUTHORITY			A. E.		A. E.	

APPARENT PLACES OF STARS, 1924. 353

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	ε Corvi. Mag. 3·2		δ Crucis. Mag. 3·1		δ Ursæ Majoris. Mag. 3·4		
	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. N.	
	^h 12 ^m 6 ^s	[°] 22 ['] 11 ^{''}	^h 12 ^m 11 ^s	58 ^m 19 ^s	^h 12 ^m 11 ^s	57 ^m 26 ^s	
Jan.	0·7 10·7 20·7 30·7	12·773 ₃₃₀ 13·103 ₃₁₀ 13·413 ₂₈₀ 13·693 ₂₄₂	40·37 ₂₂₇ 42·64 ₂₃₇ 45·01 ₂₄₂ 47·43 ₂₃₈	6·752 ₅₀₃ 7·255 ₄₆₈ 7·723 ₄₂₂ 8·145 ₃₆₄	15·02 ₂₀₅ 17·07 ₂₄₇ 19·54 ₂₈₄ 22·38 ₃₁₁	39·402 ₅₁₆ 39·918 ₄₉₄ 40·412 ₄₅₆ 40·868 ₄₀₄	62·81 ₇₈ 62·03 ₁₈ 61·85 ₄₂ 62·27 ₁₀₀
Feb.	9·6 19·6 29·6	13·935 ₂₀₃ 14·138 ₁₅₉ 14·297 ₁₁₆	49·81 ₂₂₉ 52·10 ₂₁₅ 54·25 ₁₉₇	8·509 ₃₀₂ 8·811 ₂₃₄ 9·045 ₁₆₅	25·49 ₃₃₀ 28·79 ₃₄₀ 32·19 ₃₄₃	41·272 ₃₄₀ 41·612 ₂₆₈ 41·880 ₁₉₀	63·27 ₁₅₁ 64·78 ₁₉₇ 66·75 ₂₃₂
Mar.	10·6 20·5 30·5	14·413 ₇₃ 14·486 ₃₆ 14·522 ₁	56·22 ₁₇₆ 57·98 ₁₅₄ 59·52 ₁₂₉	9·210 ₉₉ 9·309 ₃₅ 9·344 ₂₄	35·62 ₃₃₇ 38·99 ₃₂₅ 42·24 ₃₀₆	42·070 ₁₁₂ 42·182 ₃₅ 42·217 ₃₅	69·07 ₂₅₈ 71·65 ₂₇₀ 74·35 ₂₇₄
Apr.	9·5 19·4 29·4	14·523 ₂₉ 14·494 ₅₅ 14·439 ₇₅	60·81 ₁₀₅ 61·86 ₈₀ 62·66 ₅₅	9·320 ₇₉ 9·241 ₁₂₉ 9·112 ₁₇₂	45·30 ₂₈₁ 48·11 ₂₅₂ 50·63 ₂₁₇	42·182 ₉₉ 42·083 ₁₅₄ 41·929 ₁₉₉	77·09 ₂₆₆ 79·75 ₂₄₈ 82·23 ₂₂₂
May	9·4 19·4 29·3	14·364 ₉₃ 14·271 ₁₀₆ 14·165 ₁₁₅	63·21 ₃₁ 63·52 ₇ 63·59 ₁₇	8·940 ₂₀₉ 8·731 ₂₄₃ 8·488 ₂₆₈	52·80 ₁₇₈ 54·58 ₁₃₆ 55·94 ₉₂	41·730 ₂₃₄ 41·496 ₂₆₀ 41·236 ₂₇₆	84·45 ₁₈₈ 86·33 ₁₄₈ 87·81 ₁₀₅
June	8·3 18·3 28·2	14·050 ₁₂₃ 13·927 ₁₂₆ 13·801 ₁₂₆	63·42 ₄₀ 63·02 ₆₁ 62·41 ₈₁	8·220 ₂₈₇ 7·933 ₂₉₉ 7·634 ₃₀₃	56·86 ₄₅ 57·31 ₂ 57·29 ₅₀	40·960 ₂₈₄ 40·676 ₂₈₃ 40·393 ₂₇₅	88·86 ₅₉ 89·45 ₁₁ 89·56 ₃₇
July	8·2 18·2 28·2	13·675 ₁₂₃ 13·552 ₁₁₅ 13·437 ₁₀₃	61·60 ₉₈ 60·62 ₁₁₃ 59·49 ₁₂₄	7·331 ₂₉₈ 7·033 ₂₈₅ 6·748 ₂₆₀	56·79 ₉₆ 55·83 ₁₃₈ 54·45 ₁₇₉	40·118 ₂₅₉ 39·859 ₂₃₇ 39·622 ₂₁₀	89·19 ₈₄ 88·35 ₁₂₈ 87·07 ₁₇₁
Aug.	7·1 17·1 27·1	13·334 ₈₇ 13·247 ₆₄ 13·183 ₃₇	58·25 ₁₃₀ 56·95 ₁₃₃ 55·62 ₁₂₈	6·488 ₂₂₅ 6·263 ₁₈₂ 6·081 ₁₂₆	52·66 ₂₁₁ 50·55 ₂₃₉ 48·16 ₂₅₆	39·412 ₁₇₄ 39·238 ₁₃₅ 39·103 ₈₈	85·36 ₂₁₁ 83·25 ₂₄₆ 80·79 ₂₇₆
Sept.	6·1 16·0 26·0	13·146 ₄ 13·142 ₃₅ 13·177 ₇₆	54·34 ₁₁₉ 53·15 ₁₀₃ 52·12 ₈₀	5·955 ₆₁ 5·894 ₁₀ 5·904 ₈₇	45·60 ₂₆₆ 42·94 ₂₆₅ 40·29 ₂₅₄	39·015 ₃₇ 38·978 ₂₂ 39·000 ₈₃	78·03 ₃₀₃ 75·00 ₃₂₃ 71·77 ₃₃₈
Oct.	6·0 15·9 25·9	13·253 ₁₂₁ 13·374 ₁₆₈ 13·542 ₂₁₂	51·32 ₅₂ 50·80 ₂₀ 50·60 ₁₈	5·991 ₁₆₈ 6·159 ₂₄₇ 6·406 ₃₂₄	37·75 ₂₃₀ 35·45 ₁₉₉ 33·46 ₁₅₇	39·083 ₁₅₀ 39·233 ₂₁₆ 39·449 ₂₈₄	68·39 ₃₄₆ 64·93 ₃₄₄ 61·49 ₃₃₇
Nov.	4·9 14·9 24·8	13·754 ₂₅₄ 14·008 ₂₉₀ 14·298 ₃₁₈	50·78 ₅₆ 51·34 ₉₄ 52·28 ₁₃₂	6·730 ₃₉₀ 7·120 ₄₄₇ 7·567 ₄₉₀	31·89 ₁₀₇ 30·82 ₅₃ 30·29 ₅	39·733 ₃₅₀ 40·083 ₄₀₇ 40·490 ₄₅₇	58·12 ₃₂₂ 54·90 ₂₉₆ 51·94 ₂₆₂
Dec.	4·8 14·8 24·8 34·7	14·616 ₃₃₇ 14·953 ₃₄₄ 15·297 ₃₄₀ 15·637	53·60 ₁₆₆ 55·26 ₁₉₅ 57·21 ₂₁₇ 59·38	8·057 ₅₁₆ 8·573 ₅₂₅ 9·098 ₅₁₆ 9·614	30·34 ₆₄ 30·98 ₁₂₂ 32·20 ₁₇₄ 33·94	40·947 ₄₉₅ 41·442 ₅₁₈ 41·960 ₅₂₅ 42·485	49·32 ₂₂₁ 47·11 ₁₇₁ 45·40 ₁₁₆ 44·24
Mean Place	12·780	49·84	5·962	34·82	40·495	77·40	
Sec δ, Tan δ	1·080	—0·408	1·904	—1·621	1·859	+1·567	
L α, L δ	0·00	—0·4	0·00	—0·4	0·00	—0·4	
ω α, ω δ	—0·03	0·0	—0·11	0·0	+0·10	0·0	
AUTHORITY	A. E.		A. N.		A. E.		

354 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date		γ Corvi. Mag. 2.8		β Chamæleontis. Mag. 4.4		η Virginis. Mag. 4.0	
		R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.
		^h 12 ^m II	[°] 17 ['] 7	^h 12 ^m I3	[°] 78 ['] 53	^h 12 ^m I6	[°] 0 ['] I4
Jan.	0.7	53.587 ³²⁶	4.23 ²²²	54.22 ¹²⁰	1.83 ¹⁶⁴	0.737 ³¹⁸	38.31 ²⁰⁷
	10.7	53.913 ³⁰⁶	6.45 ²²⁷	55.42 ¹¹²	3.47 ²¹⁹	1.055 ³⁰²	40.38 ^{194.}
	20.7	54.219 ²⁷⁸	8.72 ²²⁶	56.54 ¹⁰⁰	5.66 ²⁶⁶	1.357 ²⁷⁶	42.32 ¹⁷⁶
	30.7	54.497 ²⁴⁴	10.98 ^{219*}	57.54 ⁸⁷	8.32 ³⁰⁷	1.633 ²⁴⁴	44.08 ¹⁵⁴
Feb.	9.6	54.741 ²⁰⁴	13.17 ²⁰⁷	58.41 ⁷¹	11.39 ³³⁸	1.877 ²⁰⁵	45.62 ¹²⁸
	19.6	54.945 ¹⁶¹	15.24 ¹⁸⁹	59.12 ⁵⁴	14.77 ³⁶¹	2.082 ¹⁶⁵	46.90 ¹⁰⁰
	29.6	55.106 ¹²⁰	17.13 ¹⁶⁹	59.66 ³⁸	18.38 ³⁷⁴	2.247 ¹²³	47.90 ⁷³
Mar.	10.6	55.226 ⁸⁰	18.82 ¹⁴⁷	60.04 ²⁰	22.12 ³⁷⁹	2.370 ⁸⁴	48.63 ⁴⁶
	20.5	55.306 ⁴¹	20.29 ¹²⁴	60.24 ²	25.91 ³⁷⁵	2.454 ⁴⁶	49.09 ²¹
	30.5	55.347 ⁸	21.53 ¹⁰⁰	60.26 ¹⁴	29.66 ³⁶³	2.500 ¹⁴	49.30 ⁰
Apr.	9.5	55.355 ²¹	22.53 ⁷⁷	60.12 ²⁹	33.29 ³⁴⁴	2.514 ¹⁷	49.30 ²⁰
	19.4	55.334 ⁴⁶	23.30 ⁵⁴	59.83 ⁴⁵	36.73 ³¹⁷	2.497 ⁴⁰	49.10 ³⁴
	29.4	55.288 ⁶⁷	23.84 ³²	59.38 ⁵⁸	39.90 ²⁸⁵	2.457 ⁶¹	48.76 ⁴⁷
May	9.4	55.221 ⁸⁴	24.16 ¹²	58.80 ⁶⁹	42.75 ²⁴⁵	2.396 ⁷⁷	48.29 ⁵⁷
	19.4	55.137 ⁹⁷	24.28 ⁹	58.11 ⁸⁰	45.20 ²⁰²	2.319 ⁸⁹	47.72 ⁶³
	29.3	55.040 ¹⁰⁸	24.19 ²⁷	57.31 ⁸⁹	47.22 ¹⁵²	2.230 ⁹⁹	47.09 ⁶⁷
June	8.3	54.932 ¹¹⁴	23.92 ⁴⁶	56.42 ⁹⁵	48.74 ¹⁰¹	2.131 ¹⁰⁵	46.42 ⁶⁹
	18.3	54.818 ¹¹⁸	23.46 ⁶²	55.47 ⁹⁸	49.75 ⁴⁶	2.026 ¹⁰⁷	45.73 ⁷⁰
	28.2	54.700 ¹¹⁹	22.84 ⁷⁸	54.49 ¹⁰⁰	50.21 ⁹	1.919 ¹⁰⁹	45.03 ⁶⁸
July	8.2	54.581 ¹¹⁷	22.06 ⁹⁰	53.49 ⁹⁸	50.12 ⁶⁴	1.810 ¹⁰⁶	44.35 ⁶⁴
	18.2	54.464 ¹¹⁰	21.16 ¹⁰⁰	52.51 ⁹⁴	49.48 ¹¹⁸	1.704 ¹⁰⁰	43.71 ⁵⁹
	28.2	54.354 ¹⁰⁰	20.16 ¹⁰⁷	51.57 ⁸⁶	48.30 ¹⁶⁷	1.604 ⁹⁰	43.12 ⁵²
Aug.	7.1	54.254 ⁸⁵	19.09 ¹¹⁰	50.71 ⁷⁵	46.63 ²¹²	1.514 ⁷⁶	42.60 ⁴¹
	17.1	54.169 ⁶⁴	17.99 ¹⁰⁹	49.96 ⁶²	44.51 ²⁵¹	1.438 ⁵⁸	42.19 ²⁸
	27.1	54.105 ³⁹	16.90 ¹⁰³	49.34 ⁴⁶	42.00 ²⁷⁹	1.380 ³⁵	41.91 ¹³
Sept.	6.1	54.066 ⁸	15.87 ⁹¹	48.88 ²⁷	39.21 ³⁰⁰	1.345 ⁶	41.78 ⁶
	16.0	54.058 ²⁹	14.96 ⁷³	48.61 ⁸	36.21 ³⁰⁸	1.339 ²⁷	41.84 ²⁷
	26.0	54.087 ⁶⁹	14.23 ⁵²	48.53 ¹⁴	33.13 ³⁰⁶	1.366 ⁶⁴	42.11 ⁵¹
Oct.	6.0	54.156 ¹¹³	13.71 ²³	48.67 ³⁵	30.07 ²⁹⁰	1.430 ¹⁰⁵	42.62 ⁷⁷
	15.9	54.269 ¹⁵⁸	13.48 ⁸	49.02 ⁵⁶	27.17 ²⁶⁴	1.535 ¹⁴⁸	43.39 ¹⁰⁴
	25.9	54.427 ²⁰³	13.56 ⁴²	49.58 ⁷⁶	24.53 ²²⁶	1.683 ¹⁹¹	44.43 ¹³⁰
Nov.	4.9	54.630 ²⁴³	13.98 ⁷⁸	50.34 ⁹²	22.27 ¹⁷⁹	1.874 ²³⁰	45.73 ¹⁵⁵
	14.9	54.873 ²⁸⁰	14.76 ¹¹³	51.26 ¹⁰⁷	20.48 ¹²³	2.104 ²⁶⁶	47.28 ¹⁷⁸
	24.8	55.153 ³⁰⁹	15.89 ¹⁴⁵	52.33 ¹¹⁶	19.25 ⁶³	2.370 ²⁹⁵	49.06 ¹⁹⁵
Dec.	4.8	55.462 ³²⁸	17.34 ¹⁷⁵	53.49 ¹²³	18.62 ²	2.665 ³¹⁶	51.01 ²⁰⁸
	14.8	55.790 ³³⁶	19.09 ¹⁹⁹	54.72 ¹²⁵	18.64 ⁶⁵	2.981 ³²⁶	53.09 ²¹³
	24.8	56.126 ³³⁴	21.08 ²¹⁵	55.97 ¹²³	19.29 ¹²⁸	3.307 ³²⁶	55.22 ²¹²
	34.7	56.460	23.23	57.20	20.57	3.633	57.34
Mean Place		53.695	12.19	51.03	24.88	1.054	40.48
Sec δ , Tan δ		1.046	-0.308	5.190	-5.092	1.000	-0.004
L α , L δ		0.00	-0.4	+0.01	-0.4	0.00	-0.4
ω α , ω δ		-0.02	0.0	-0.34	-0.1	0.00	-0.1
AUTHORITY		A. N.		A. E.		A. E.	

APPARENT PLACES OF STARS, 1924. 355

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	α Crucis. Mag. 1.6			δ Corvi. Mag. 3.1			γ Crucis. Mag. 1.6											
	R.A.		Dec. S.	R.A.		Dec. S.	R.A.		Dec. S.									
	^h 12	^m 22	^s 62° 40'	^h 12	^m 25	^s 16° 5'	^h 12	^m 26	^s 56° 40'									
Jan.	0.7	22.24	57	20.19	184	55.566	329	24.78	217	56.874	496	56.25	188					
	10.7	22.81	54	22.03	232	55.895	311	26.95	222	57.370	467	58.13	232					
	20.7	23.35	48	24.35	272	56.206	286	29.17	220	57.837	427	60.45	269					
	30.7	23.83	43	27.07	303	56.492	254	31.37	213	58.264	376	63.14	298					
Feb.	9.6	24.26	36	30.10	328	56.746	216	33.50	200	58.640	317	66.12	317					
	19.6	24.62	28	33.38	342	56.962	175	35.50	183	58.957	256	69.29	329					
	29.6	24.90	21	36.80	350	57.137	135	37.33	163	59.213	192	72.58	333					
Mar.	10.6	25.11	13	40.30	348	57.272	94	38.96	141	59.405	128	75.91	330					
	20.5	25.24	6	43.78	339	57.366	57	40.37	118	59.533	68	79.21	320					
	30.5	25.30	1	47.17	323	57.423	23	41.55	95	59.601	10	82.41	303					
Apr.	9.5	25.29	7	50.40	302	57.446	7	42.50	72	59.611	43	85.44	281					
	19.4	25.22	13	53.42	274	57.439	32	43.22	51	59.568	93	88.25	253					
	29.4	25.09	19	56.16	241	57.407	55	43.73	31	59.475	135	90.78	222					
May	9.4	24.90	23	58.57	203	57.352	74	44.04	10	59.340	175	93.00	185					
	19.4	24.67	27	60.60	162	57.278	88	44.14	8	59.165	209	94.85	146					
	29.3	24.40	31	62.22	116	57.190	101	44.06	26	58.956	237	96.31	104					
June	8.3	24.09	34	63.38	69	57.089	110	43.80	42	58.719	260	97.35	59					
	18.3	23.75	35	64.07	20	56.979	116	43.38	58	58.459	275	97.94	13					
	28.2	23.40	36	64.27	29	56.863	119	42.80	72	58.184	284	98.07	34					
July	8.2	23.04	36	63.98	78	56.744	119	42.08	82	57.900	284	97.73	78					
	18.2	22.68	34	63.20	124	56.625	115	41.26	92	57.616	276	96.95	121					
	28.2	22.34	32	61.96	167	56.510	106	40.34	98	57.340	258	95.74	161					
Aug.	7.1	22.02	29	60.29	204	56.404	93	39.36	101	57.082	229	94.13	195					
	17.1	21.73	23	58.25	235	56.311	76	38.35	100	56.853	190	92.18	223					
	27.1	21.50	17	55.90	259	56.235	50	37.35	93	56.663	141	89.95	243					
Sept.	6.1	21.33	10	53.31	272	56.185	20	36.42	83	56.522	82	87.52	255					
	16.0	21.23	2	50.59	276	56.165	15	35.59	66	56.440	15	84.97	257					
	26.0	21.21	7	47.83	268	56.180	54	34.93	44	56.425	60	82.40	247					
Oct.	6.0	21.28	16	45.15	250	56.234	99	34.49	19	56.485	137	79.93	229					
	15.9	21.44	26	42.65	221	56.333	144	34.30	11	56.622	214	77.64	199					
	25.9	21.70	34	40.44	182	56.477	189	34.41	45	56.836	290	75.65	161					
Nov.	4.9	22.04	42	38.62	135	56.666	232	34.86	78	57.126	359	74.04	115					
	14.9	22.46	49	37.27	81	56.898	270	35.64	112	57.485	418	72.89	62					
	24.8	22.95	54	36.46	23	57.168	301	36.76	143	57.903	463	72.27	6					
Dec.	4.8	23.49	57	36.23	37	57.469	322	38.19	172	58.366	494	72.21	51					
	14.8	24.06	59	36.60	97	57.791	335	39.91	194	58.860	509	72.72	106					
	24.8	24.65	58	37.57	152	58.126	334	41.85	212	59.369	505	73.78	160					
	34.7	25.23		39.09		58.460		43.97		59.874		75.38						
Mean Place	21.39			41.36			55.778			32.95			56.349			76.38		
Sec δ , Tan δ	2.179			-1.936			1.041			-0.288			1.821			-1.522		
L α , L δ	0.00			-0.4			0.00			-0.4			0.00			-0.4		
ω α , ω δ	-0.13			-0.1			-0.02			-0.1			-0.10			-0.1		
AUTHORITY	A. E.			A. E.			A. E.			A. N.								

356 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	β Corvi. Mag. 2.8		α Muscæ. Mag. 2.9		γ Centauri. Mag. 2.4	
	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.
	h m 12 30	° ' " 22 58	h m 12 32	° ' " 68 42	h m 12 37	° ' " 48 32
Jan. 0.7	23.268 339	25.23 215	38.95 71	38.69 160	19.210 432	15.06 189
10.7	23.607 322	27.38 227	39.66 66	40.29 211	19.642 413	16.95 226
20.7	23.929 297	29.65 233	40.32 61	42.40 257	20.055 379	19.21 257
30.7	24.226 264	31.98 233	40.93 54	44.97 294	20.434 338	21.78 281
Feb. 9.6	24.490 225	34.31 226	41.47 46	47.91 323	20.772 290	24.59 296
19.6	24.715 184	36.57 214	41.93 37	51.14 344	21.062 238	27.55 303
29.6	24.899 143	38.71 198	42.30 28	54.58 356	21.300 185	30.58 305
Mar. 10.6	25.042 101	40.69 179	42.58 18	58.14 359	21.485 131	33.63 298
20.5	25.143 64	42.48 158	42.76 10	61.73 354	21.616 81	36.61 287
30.5	25.207 28	44.06 135	42.86 1	65.27 344	21.697 33	39.48 269
Apr. 9.5	25.235 4	45.41 113	42.87 8	68.71 325	21.730 12	42.17 248
19.4	25.231 31	46.54 89	42.79 16	71.96 299	21.718 52	44.65 222
29.4	25.200 54	47.43 65	42.63 22	74.95 269	21.666 89	46.87 192
May 9.4	25.146 75	48.08 42	42.41 30	77.64 232	21.577 121	48.79 159
19.4	25.071 92	48.50 19	42.11 34	79.96 191	21.456 150	50.38 123
29.3	24.979 105	48.69 4	41.77 40	81.87 146	21.306 174	51.61 85
June 8.3	24.874 116	48.65 26	41.37 44	83.33 97	21.132 193	52.46 46
18.3	24.758 125	48.39 47	40.93 46	84.30 47	20.939 209	52.92 5
28.3	24.633 129	47.92 67	40.47 48	84.77 5	20.730 218	52.97 36
July 8.2	24.504 129	47.25 86	39.99 48	84.72 57	20.512 222	52.61 75
18.2	24.375 126	46.39 101	39.51 47	84.15 107	20.290 216	51.86 113
28.2	24.249 118	45.38 113	39.04 44	83.08 153	20.074 205	50.73 147
Aug. 7.1	24.131 104	44.25 123	38.60 39	81.55 196	19.869 186	49.26 177
17.1	24.027 86	43.02 126	38.21 33	79.59 232	19.683 156	47.49 200
27.1	23.941 60	41.76 125	37.88 26	77.27 260	19.527 119	45.49 217
Sept. 6.1	23.881 28	40.51 118	37.62 17	74.67 280	19.408 72	43.32 226
16.0	23.853 9	39.33 105	37.45 6	71.87 288	19.336 18	41.06 226
26.0	23.862 51	38.28 85	37.39 5	68.99 286	19.318 42	38.80 216
Oct. 6.0	23.913 97	37.43 60	37.44 16	66.13 271	19.360 106	36.64 197
16.0	24.010 145	36.83 30	37.60 29	63.42 247	19.466 173	34.67 168
25.9	24.155 192	36.53 4	37.89 39	60.95 211	19.639 238	32.99 132
Nov. 4.9	24.347 237	36.57 42	38.28 49	58.84 166	19.877 298	31.67 89
14.9	24.584 277	36.99 79	38.77 58	57.18 114	20.175 351	30.78 39
24.8	24.861 309	37.78 116	39.35 65	56.04 55	20.526 393	30.39 12
Dec. 4.8	25.170 332	38.94 151	40.00 70	55.49 5	20.919 423	30.51 64
14.8	25.502 345	40.45 180	40.70 71	55.54 67	21.342 438	31.15 115
24.8	25.847 345	42.25 204	41.41 72	56.21 126	21.780 440	32.30 163
34.7	26.192	44.29	42.13	57.47	22.220	33.93
Mean Place	23.430	35.93	37.90	61.29	19.031	33.70
Sec δ , Tan δ	1.086	-0.424	2.755	-2.567	1.510	-1.132
L α , L δ	0.00	-0.4	+0.01	-0.4	0.00	-0.4
ω α , ω δ	-0.03	-0.1	-0.17	-0.1	-0.07	-0.2
AUTHORITY	A. E.		A. E.		A. E.	

APPARENT PLACES OF STARS, 1924. 357

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	γ Virginis (mean). Mag. 2.9		ρ Virginis. Mag. 5.0		β Muscæ. Mag. 3.3		
	R.A.	Dec. S.	R.A.	Dec. N.	R.A.	Dec. S.	
	^h 12 ^m 37	[°] 1 ['] 1	^h 12 ^m 38	[°] 10 ['] 38	^h 12 ^m 41	[°] 67 ['] 41	
Jan.	0.7 10.7 20.7 30.7	48.054 ³²¹ 48.375 ³⁰⁸ 48.683 ²⁸⁶ 48.969 ²⁵⁶	55.03 ²⁰⁷ 57.10 ¹⁹⁶ 59.06 ¹⁸⁰ 60.86 ¹⁵⁸	1.754 ³²⁷ 2.081 ³¹⁵ 2.396 ²⁹³ 2.689 ²⁶³	73.87 ¹⁹⁷ 71.90 ¹⁷⁵ 70.15 ¹⁴⁵ 68.70 ¹¹⁴	36.95 ⁶⁸ 37.63 ⁶⁵ 38.28 ⁶⁰ 38.88 ⁵⁴	9.85 ¹⁵⁰ 11.35 ²⁰¹ 13.36 ²⁴⁷ 15.83 ²⁸⁵
Feb.	9.6 19.6 29.6	49.225 ²²² 49.447 ¹⁸³ 49.630 ¹⁴³	62.44 ¹³² 63.76 ¹⁰⁶ 64.82 ⁷⁸	2.952 ²²⁷ 3.179 ¹⁸⁹ 3.368 ¹⁴⁷	67.56 ⁷⁹ 66.77 ⁴⁴ 66.33 ¹¹	39.42 ⁴⁶ 39.88 ³⁸ 40.26 ²⁹	18.68 ³¹⁴ 21.82 ³³⁶ 25.18 ³⁴⁹
Mar.	10.6 20.5 30.5	49.773 ¹⁰⁴ 49.877 ⁶⁸ 49.945 ³⁴	65.60 ⁵⁰ 66.10 ²⁶ 66.36 ³	3.515 ¹⁰⁷ 3.622 ⁶⁹ 3.691 ³⁴	66.22 ¹⁸ 66.40 ⁴⁶ 66.86 ⁶⁶	40.55 ²¹ 40.76 ¹² 40.88 ³	28.67 ³⁵⁴ 32.21 ³⁵⁰ 35.71 ³⁴¹
Apr.	9.5 19.4 29.4	49.979 ⁴ 49.983 ²² 49.961 ⁴⁴	66.39 ¹⁶ 66.23 ³² 65.91 ⁴⁵	3.725 ² 3.727 ²⁵ 3.702 ⁴⁸	67.52 ⁸³ 68.35 ⁹³ 69.28 ¹⁰⁰	40.91 ⁴ 40.87 ¹² 40.75 ²⁰	39.12 ³²³ 42.35 ³⁰¹ 45.36 ²⁷⁰
May	9.4 19.4 29.3	49.917 ⁶³ 49.854 ⁷⁸ 49.776 ⁹¹	65.46 ⁵⁴ 64.92 ⁶² 64.30 ⁶⁶	3.654 ⁶⁷ 3.587 ⁸² 3.505 ⁹⁵	70.28 ¹⁰² 71.30 ⁹⁹ 72.29 ⁹⁴	40.55 ²⁵ 40.30 ³¹ 39.99 ³⁷	48.06 ²³⁶ 50.42 ¹⁹⁶ 52.38 ¹⁵³
June	8.3 18.3 28.3	49.685 ¹⁰⁰ 49.585 ¹⁰⁷ 49.478 ¹¹¹	63.64 ⁶⁹ 62.95 ⁶⁸ 62.27 ⁶⁸	3.410 ¹⁰⁴ 3.306 ¹¹⁰ 3.196 ¹¹⁴	73.23 ⁸⁵ 74.08 ⁷⁵ 74.83 ⁶¹	39.62 ⁴⁰ 39.22 ⁴³ 38.79 ⁴⁵	53.91 ¹⁰⁵ 54.96 ⁵⁵ 55.51 ⁵
July	8.2 18.2 28.2	49.367 ¹¹² 49.255 ¹¹⁰ 49.145 ¹⁰³	61.59 ⁶⁵ 60.94 ⁵⁹ 60.35 ⁵²	3.082 ¹¹³ 2.969 ¹¹¹ 2.858 ¹⁰³	75.44 ⁴⁸ 75.92 ³² 76.24 ¹⁴	38.34 ⁴⁶ 37.88 ⁴⁵ 37.43 ⁴²	55.56 ⁴⁷ 55.09 ⁹⁷ 54.12 ¹⁴⁴
Aug.	7.1 17.1 27.1	49.042 ⁹³ 48.949 ⁷⁷ 48.872 ⁵⁵	59.83 ⁴³ 59.40 ³¹ 59.09 ¹⁶	2.755 ⁹² 2.663 ⁷⁶ 2.587 ⁵⁵	76.38 ⁴ 76.34 ²⁵ 76.09 ⁴⁵	37.01 ³⁹ 36.62 ³³ 36.29 ²⁶	52.68 ¹⁸⁶ 50.82 ²²³ 48.59 ²⁵³
Sept.	6.1 16.0 26.0	48.817 ²⁸ 48.789 ⁴ 48.793 ⁴¹	58.93 ² 58.95 ²³ 59.18 ⁴⁶	2.532 ²⁸ 2.504 ⁴ 2.508 ⁴²	75.64 ⁶⁹ 74.95 ⁹² 74.03 ¹¹⁷	36.03 ¹⁸ 35.85 ⁸ 35.77 ³	46.06 ²⁷³ 43.33 ²⁸⁴ 40.49 ²⁸³
Oct.	6.0 16.0 25.9	48.834 ⁸² 48.916 ¹²⁷ 49.043 ¹⁷⁰	59.64 ⁷¹ 60.35 ⁹⁷ 61.32 ¹²⁵	2.550 ⁸² 2.632 ¹²⁶ 2.758 ¹⁷⁰	72.86 ¹⁴¹ 71.45 ¹⁶⁵ 69.80 ¹⁸⁶	35.80 ¹⁴ 35.94 ²⁵ 36.19 ³⁶	37.66 ²⁷¹ 34.95 ²⁴⁷ 32.48 ²¹⁴
Nov.	4.9 14.9 24.8	49.213 ²¹³ 49.426 ²⁵¹ 49.677 ²⁸⁴	62.57 ¹⁵⁰ 64.07 ¹⁷² 65.79 ¹⁹²	2.928 ²¹³ 3.141 ²⁵³ 3.394 ²⁸⁵	67.94 ²⁰⁴ 65.90 ²¹⁹ 63.71 ²²⁷	36.55 ⁴⁶ 37.01 ⁵⁵ 37.56 ⁶²	30.34 ¹⁷⁰ 28.64 ¹²⁰ 27.44 ⁶³
Dec.	4.8 14.8 24.8 34.7	49.961 ³⁰⁸ 50.269 ³²² 50.591 ³²⁷ 50.918 ³²⁷	67.71 ²⁰⁴ 69.75 ²¹² 71.87 ²¹² 73.99 ²¹²	3.679 ³¹¹ 3.990 ³²⁷ 4.317 ³³¹ 4.648 ³³¹	61.44 ²²⁸ 59.16 ²²⁴ 56.92 ²¹¹ 54.81 ²¹¹	38.18 ⁶⁶ 38.84 ⁶⁹ 39.53 ⁶⁹ 40.22 ⁶⁹	26.81 ² 26.79 ⁵⁷ 27.36 ¹¹⁷ 28.53 ¹¹⁷
Mean Place	48.491	58.28	2.309	74.73	36.13	32.58	
Sec δ , Tan δ	1.000	-0.018	1.018	+0.188	2.635	-2.437	
L α , L δ	0.00	-0.4	0.00	-0.4	+0.01	-0.4	
ω α , ω δ	0.00	-0.2	+0.01	-0.2	-0.16	-0.2	
AUTHORITY	A. N.				A. N.		

358 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	β Crucis. Mag. 1.5		35 Virginis. Mag. 6.7		31 Comæ. Mag. 5.1	
	R.A.	Dec. S.	R.A.	Dec. N.	R.A.	Dec. N.
	^h 12 43	[°] 59 16	^h 12 43	[°] 3 58	^h 12 47	[°] 27 56
Jan.	0.8 16.446 ^s 534	3.91 ^s 164	58.690 ^s 324	76.59 ^s 205	59.064 ^s 353	67.92 ^s 178
	10.7 16.980 ^s 511	5.55 ^s 210	59.014 ^s 312	74.54 ^s 188	59.417 ^s 343	66.14 ^s 140
	20.7 17.491 ^s 472	7.65 ^s 251	59.326 ^s 291	72.66 ^s 166	59.760 ^s 322	64.74 ^s 95
	30.7 17.963 ^s 422	10.16 ^s 283	59.617 ^s 262	71.00 ^s 141	60.082 ^s 293	63.79 ^s 49
Feb.	9.6 18.385 ^s 365	12.99 ^s 308	59.879 ^s 229	69.59 ^s 110	60.375 ^s 257	63.30 ^s 3
	19.6 18.750 ^s 301	16.07 ^s 323	60.108 ^s 190	68.49 ^s 80	60.632 ^s 214	63.27 ^s 43
	29.6 19.051 ^s 235	19.30 ^s 332	60.298 ^s 151	67.69 ^s 50	60.846 ^s 170	63.70 ^s 81
Mar.	10.6 19.286 ^s 169	22.62 ^s 333	60.449 ^s 112	67.19 ^s 20	61.016 ^s 124	64.51 ^s 116
	20.5 19.455 ^s 104	25.95 ^s 326	60.561 ^s 74	66.99 ^s 5	61.140 ^s 81	65.67 ^s 143
	30.5 19.559 ^s 42	29.21 ^s 314	60.635 ^s 40	67.04 ^s 27	61.221 ^s 40	67.10 ^s 163
Apr.	9.5 19.601 ^s 17	32.35 ^s 294	60.675 ^s 10	67.31 ^s 46	61.261 ^s 3	68.73 ^s 174
	19.5 19.584 ^s 73	35.29 ^s 270	60.685 ^s 16	67.77 ^s 60	61.264 ^s 31	70.47 ^s 178
	29.4 19.511 ^s 122	37.99 ^s 241	60.669 ^s 40	68.37 ^s 70	61.233 ^s 57	72.25 ^s 175
May	9.4 19.389 ^s 168	40.40 ^s 206	60.629 ^s 59	69.07 ^s 77	61.176 ^s 82	74.00 ^s 165
	19.4 19.221 ^s 208	42.46 ^s 169	60.570 ^s 75	69.84 ^s 79	61.094 ^s 101	75.65 ^s 149
	29.3 19.013 ^s 245	44.15 ^s 127	60.495 ^s 88	70.63 ^s 80	60.993 ^s 114	77.14 ^s 130
June	8.3 18.768 ^s 273	45.42 ^s 82	60.407 ^s 99	71.43 ^s 77	60.879 ^s 127	78.44 ^s 105
	18.3 18.495 ^s 295	46.24 ^s 36	60.308 ^s 106	72.20 ^s 73	60.752 ^s 135	79.49 ^s 80
	28.3 18.200 ^s 310	46.60 ^s 10	60.202 ^s 111	72.93 ^s 67	60.617 ^s 139	80.29 ^s 50
July	8.2 17.890 ^s 315	46.50 ^s 57	60.091 ^s 113	73.60 ^s 58	60.478 ^s 138	80.79 ^s 21
	18.2 17.575 ^s 311	45.93 ^s 103	59.978 ^s 111	74.18 ^s 48	60.340 ^s 136	81.00 ^s 10
	28.2 17.264 ^s 295	44.90 ^s 144	59.867 ^s 105	74.66 ^s 37	60.204 ^s 128	80.90 ^s 41
Aug.	7.2 16.969 ^s 269	43.46 ^s 182	59.762 ^s 95	75.03 ^s 23	60.076 ^s 115	80.49 ^s 72
	17.1 16.700 ^s 231	41.64 ^s 214	59.667 ^s 80	75.26 ^s 7	59.961 ^s 98	79.77 ^s 102
	27.1 16.469 ^s 180	39.50 ^s 239	59.587 ^s 59	75.33 ^s 10	59.863 ^s 75	78.75 ^s 132
Sept.	6.1 16.289 ^s 120	37.11 ^s 254	59.528 ^s 33	75.23 ^s 31	59.788 ^s 47	77.43 ^s 161
	16.0 16.169 ^s 48	34.57 ^s 261	59.495 ^s 1	74.92 ^s 52	59.741 ^s 12	75.82 ^s 188
	26.0 16.121 ^s 30	31.96 ^s 258	59.494 ^s 35	74.40 ^s 76	59.729 ^s 27	73.94 ^s 213
Oct.	6.0 16.151 ^s 113	29.38 ^s 243	59.529 ^s 77	73.64 ^s 102	59.756 ^s 71	71.81 ^s 235
	16.0 16.264 ^s 199	26.95 ^s 217	59.606 ^s 120	72.62 ^s 126	59.827 ^s 117	69.46 ^s 254
	25.9 16.463 ^s 281	24.78 ^s 182	59.726 ^s 165	71.36 ^s 151	59.944 ^s 166	66.92 ^s 268
Nov.	4.9 16.744 ^s 358	22.96 ^s 140	59.891 ^s 208	69.85 ^s 174	60.110 ^s 213	64.24 ^s 275
	14.9 17.102 ^s 425	21.56 ^s 90	60.099 ^s 247	68.11 ^s 192	60.323 ^s 257	61.49 ^s 277
	24.9 17.527 ^s 479	20.66 ^s 35	60.346 ^s 281	66.19 ^s 208	60.580 ^s 296	58.72 ^s 270
Dec.	4.8 18.006 ^s 518	20.31 ^s 22	60.627 ^s 306	64.11 ^s 216	60.876 ^s 326	56.02 ^s 257
	14.8 18.524 ^s 538	20.53 ^s 79	60.933 ^s 322	61.95 ^s 217	61.202 ^s 346	53.45 ^s 234
	24.8 19.062 ^s 541	21.32 ^s 134	61.255 ^s 327	59.78 ^s 213	61.548 ^s 355	51.11 ^s 203
	34.8 19.603 ^s	22.66 ^s	61.582 ^s	57.65 ^s	61.903 ^s	49.08 ^s
Mean Place	16.048	25.21	59.213	74.89	59.871	74.08
Sec δ , Tan δ	1.957	-1.682	1.002	+0.070	1.132	+0.531
L α , L δ	+0.01	-0.4	0.00	-0.4	0.00	-0.4
ω α , ω δ	-0.11	-0.2	+0.01	-0.2	+0.03	-0.2
AUTHORITY	A. E.					

APPARENT PLACES OF STARS, 1924. 359

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date,	ψ Virginis. Mag. 4·9		ϵ Ursæ Majoris. Mag. 1·7		δ Virginis. Mag. 3·7	
	R.A.	Dec. S.	R.A.	Dec. N.	R.A.	Dec. N.
	^h 12 ^m 50 ^s	[°] 9 ['] 7	^h 12 ^m 50 ^s	[°] 56 ['] 21	^h 12 ^m 51 ^s	[°] 3 ['] 48
Jan. 0·8	23·451 ³²⁷	29·00 ²⁰⁸	40·051 ⁵⁰²	66·45 ¹²⁸	45·888 ³²³	38·64 ²⁰⁵
10·7	23·778 ³¹⁵	31·08 ²⁰⁷	40·553 ⁴⁹⁵	65·17 ⁶⁹	46·211 ³¹³	36·59 ¹⁹⁰
20·7	24·093 ²⁹⁴	33·15 ¹⁹⁹	41·048 ⁴⁷⁰	64·48 ⁶	46·524 ²⁹⁴	34·69 ¹⁶⁸
30·7	24·387 ²⁶⁷	35·14 ¹⁸⁵	41·518 ⁴³⁰	64·42 ⁵⁵	46·818 ²⁶⁶	33·01 ¹⁴²
Feb. 9·6	24·654 ²³²	36·99 ¹⁶⁷	41·948 ³⁷⁹	64·97 ¹¹³	47·084 ²³³	31·59 ¹¹³
19·6	24·886 ¹⁹⁵	38·66 ¹⁴⁵	42·327 ³¹⁶	66·10 ¹⁶⁴	47·317 ¹⁹⁷	30·46 ⁸²
29·6	25·081 ¹⁵⁷	40·11 ¹²³	42·643 ²⁴⁷	67·74 ²⁰⁹	47·514 ¹⁵⁷	29·64 ⁵¹
Mar. 10·6	25·238 ¹¹⁹	41·34 ⁹⁸	42·890 ¹⁷⁵	69·83 ²⁴²	47·671 ¹¹⁸	29·13 ²³
20·5	25·357 ⁸²	42·32 ⁷⁵	43·065 ¹⁰²	72·25 ²⁶⁵	47·789 ⁸²	28·90 ⁴
30·5	25·439 ⁴⁹	43·07 ⁵²	43·167 ³³	74·90 ²⁷⁸	47·871 ⁴⁸	28·94 ²⁷
Apr. 9·5	25·488 ¹⁸	43·59 ³¹	43·200 ³³	77·68 ²⁷⁹	47·919 ¹⁶	29·21 ⁴⁵
19·5	25·506 ⁸	43·90 ¹³	43·167 ⁹²	80·47 ²⁶⁹	47·935 ¹⁰	29·66 ⁶⁰
29·4	25·498 ³²	44·03 ⁵	43·075 ¹⁴³	83·16 ²⁵⁰	47·925 ³⁴	30·26 ⁷⁰
May 9·4	25·466 ⁵²	43·98 ¹⁹	42·932 ¹⁸⁵	85·66 ²²²	47·891 ⁵⁵	30·96 ⁷⁷
19·4	25·414 ⁷⁰	43·79 ³¹	42·747 ²²¹	87·88 ¹⁸⁸	47·836 ⁷¹	31·73 ⁸¹
29·3	25·344 ⁸⁴	43·48 ⁴²	42·526 ²⁴⁸	89·76 ¹⁴⁸	47·765 ⁸⁶	32·54 ⁸⁰
June 8·3	25·260 ⁹⁷	43·06 ⁵¹	42·278 ²⁶⁶	91·24 ¹⁰⁴	47·679 ⁹⁷	33·34 ⁷⁸
18·3	25·163 ¹⁰⁶	42·55 ⁶⁰	42·012 ²⁷⁷	92·28 ⁵⁷	47·582 ¹⁰⁶	34·12 ⁷⁴
28·3	25·057 ¹¹³	41·95 ⁶⁵	41·735 ²⁸⁰	92·85 ⁹	47·476 ¹¹²	34·86 ⁶⁷
July 8·2	24·944 ¹¹⁷	41·30 ⁷⁰	41·455 ²⁷⁷	92·94 ³⁹	47·364 ¹¹⁵	35·53 ⁵⁹
18·2	24·827 ¹¹⁶	40·60 ⁷³	41·178 ²⁶⁶	92·55 ⁸⁶	47·249 ¹¹⁴	36·12 ⁴⁹
28·2	24·711 ¹¹²	39·87 ⁷³	40·912 ²⁴⁸	91·69 ¹³³	47·135 ¹¹⁰	36·61 ³⁷
Aug. 7·2	24·599 ¹⁰³	39·14 ⁷⁰	40·664 ²²³	90·36 ¹⁷⁶	47·025 ¹⁰⁰	36·98 ²⁴
17·1	24·496 ⁸⁸	38·44 ⁶⁴	40·441 ¹⁹²	88·60 ²¹⁶	46·925 ⁸⁷	37·22 ⁸
27·1	24·408 ⁶⁸	37·80 ⁵⁴	40·249 ¹⁵³	86·44 ²⁵³	46·838 ⁶⁷	37·30 ¹⁰
Sept. 6·1	24·340 ⁴¹	37·26 ⁴³	40·096 ¹⁰⁷	83·91 ²⁸⁴	46·771 ⁴⁰	37·20 ²⁹
16·0	24·299 ⁸	36·83 ²⁴	39·989 ⁵³	81·07 ³¹²	46·731 ¹⁰	36·91 ⁵²
26·0	24·291 ³⁰	36·59 ⁴	39·936 ⁵	77·95 ³³³	46·721 ²⁷	36·39 ⁷⁵
Oct. 6·0	24·321 ⁷³	36·55 ²¹	39·941 ⁷⁰	74·62 ³⁴⁸	46·748 ⁶⁸	35·64 ¹⁰⁰
16·0	24·394 ¹¹⁷	36·76 ⁴⁸	40·011 ¹³⁹	71·14 ³⁵⁶	46·816 ¹¹²	34·64 ¹²⁵
25·9	24·511 ¹⁶³	37·24 ⁷⁸	40·150 ²⁰⁸	67·58 ³⁵⁵	46·928 ¹⁵⁷	33·39 ¹⁵⁰
Nov. 4·9	24·674 ²⁰⁷	38·02 ¹⁰⁶	40·358 ²⁷⁸	64·03 ³⁴⁷	47·085 ²⁰⁰	31·89 ¹⁷³
14·9	24·881 ²⁴⁸	39·08 ¹³⁵	40·636 ³⁴²	60·56 ³²⁸	47·285 ²⁴¹	30·16 ¹⁹¹
24·9	25·129 ²⁸²	40·43 ¹⁶⁰	40·978 ⁴⁰¹	57·28 ³⁰⁰	47·526 ²⁷⁵	28·25 ²⁰⁷
Dec. 4·8	25·411 ³⁰⁹	42·03 ¹⁸¹	41·379 ⁴⁴⁸	54·28 ²⁶⁴	47·801 ³⁰²	26·18 ²¹⁶
14·8	25·720 ³²⁴	43·84 ¹⁹⁹	41·827 ⁴⁸³	51·64 ²¹⁹	48·103 ³¹⁹	24·02 ²¹⁸
24·8	26·044 ³³⁰	45·83 ²⁰⁷	42·310 ⁵⁰²	49·45 ¹⁶⁵	48·422 ³²⁶	21·84 ²¹³
34·8	26·374	47·90	42·812	47·80	48·748	19·71
Mean Place	23·888	35·59	41·463	79·46	46·455	36·60
Sec δ , Tan δ	1·013	−0·161	1·806	+1·503	1·002	+0·067
L α , L δ	0·00	−0·4	−0·01	−0·4	0·00	−0·4
ω α , ω δ	−0·01	−0·2	+0·10	−0·2	0·00	−0·2
AUTHORITY			A. E.		A. E.	

360 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	12 Canum Venat. Mag. 2·9		ε Virginis. Mag. 3·0		θ Virginis. Mag. 4·4	
	R.A.	Dec. N.	R.A.	Dec. N.	R.A.	Dec. S.
	^h 12 ^m 52	^h 38 ^m 43	^h 12 ^m 58	^h 11 ^m 21	^h 13 ^m 6	^h 5 ^m 7
Jan. 0·8	27·530 ³⁸⁴	33·62 ¹⁶⁶	22·940 ³²⁷	61·89 ²⁰²	0·192 ³²⁵	55·42 ²⁰⁵
10·7	27·914 ³⁷⁷	31·96 ¹¹⁶	23·267 ³¹⁹	59·87 ¹⁷⁹	0·517 ³¹⁷	57·47 ²⁰⁰
20·7	28·291 ³⁵⁷	30·80 ⁶⁴	23·586 ³⁰¹	58·08 ¹⁴⁹	0·834 ²⁹⁹	59·47 ¹⁸⁹
30·7	28·648 ³²⁶	30·16 ¹⁰	23·887 ²⁷⁵	56·59 ¹¹⁶	1·133 ²⁷⁴	61·36 ¹⁷¹
Feb. 9·7	28·974 ²⁸⁶	30·06 ⁴²	24·162 ²⁴²	55·43 ⁸¹	1·407 ²⁴³	63·07 ¹⁵⁰
19·6	29·260 ²⁴¹	30·48 ⁹¹	24·404 ²⁰⁵	54·62 ⁴⁵	1·650 ²⁰⁸	64·57 ¹²⁶
29·6	29·501 ¹⁹¹	31·39 ¹³⁴	24·609 ¹⁶⁶	54·17 ¹⁰	1·858 ¹⁷¹	65·83 ¹⁰⁰
Mar. 10·6	29·692 ¹³⁹	32·73 ¹⁶⁹	24·775 ¹²⁷	54·07 ²¹	2·029 ¹³⁴	66·83 ⁷⁴
20·5	29·831 ⁸⁹	34·42 ¹⁹⁶	24·902 ⁸⁹	54·28 ⁵⁰	2·163 ⁹⁸	67·57 ⁵⁰
30·5	29·920 ⁴²	36·38 ²¹⁴	24·991 ⁵⁴	54·78 ⁷²	2·261 ⁶⁴	68·07 ²⁷
Apr. 9·5	29·962 ²	38·52 ²²²	25·045 ²¹	55·50 ⁹⁰	2·325 ³³	68·34 ⁶
19·5	29·960 ⁴¹	40·74 ²²²	25·066 ⁸	56·40 ¹⁰¹	2·358 ⁶	68·40 ¹¹
29·4	29·919 ⁷⁵	42·96 ²¹³	25·058 ³²	57·41 ¹⁰⁹	2·364 ¹⁸	68·29 ²⁶
May 9·4	29·844 ¹⁰²	45·09 ¹⁹⁶	25·026 ⁵⁴	58·50 ¹¹⁰	2·346 ⁴⁰	68·03 ³⁷
19·4	29·742 ¹²⁷	47·05 ¹⁷³	24·972 ⁷²	59·60 ¹⁰⁸	2·306 ⁶⁰	67·66 ⁴⁷
29·4	29·615 ¹⁴⁴	48·78 ¹⁴⁵	24·900 ⁸⁷	60·68 ¹⁰²	2·246 ⁷⁶	67·19 ⁵⁵
June 8·3	29·471 ¹⁵⁸	50·23 ¹¹³	24·813 ¹⁰⁰	61·70 ⁹³	2·170 ⁹⁰	66·64 ⁶⁰
18·3	29·313 ¹⁶⁷	51·36 ⁷⁸	24·713 ¹⁰⁹	62·63 ⁸¹	2·080 ¹⁰²	66·04 ⁶³
28·3	29·146 ¹⁷²	52·14 ⁴¹	24·604 ¹¹⁶	63·44 ⁶⁸	1·978 ¹¹⁰	65·41 ⁶⁶
July 8·2	28·974 ¹⁷¹	52·55 ²	24·488 ¹¹⁹	64·12 ⁵²	1·868 ¹¹⁶	64·75 ⁶⁵
18·2	28·803 ¹⁶⁷	52·57 ³⁶	24·369 ¹¹⁹	64·64 ³⁴	1·752 ¹¹⁹	64·10 ⁶³
28·2	28·636 ¹⁵⁷	52·21 ⁷⁴	24·250 ¹¹⁵	64·98 ¹⁶	1·633 ¹¹⁷	63·47 ⁶⁰
Aug. 7·2	28·479 ¹⁴³	51·47 ¹¹²	24·135 ¹⁰⁶	65·14 ⁴	1·516 ¹⁰⁹	62·87 ⁵⁴
17·1	28·336 ¹²²	50·35 ¹⁴⁷	24·029 ⁹³	65·10 ²⁵	1·407 ⁹⁷	62·33 ⁴⁶
27·1	28·214 ⁹⁷	48·88 ¹⁸⁰	23·936 ⁷³	64·85 ⁴⁷	1·310 ⁷⁹	61·87 ³³
Sept. 6·1	28·117 ⁶⁵	47·08 ²¹²	23·863 ⁴⁸	64·38 ⁷¹	1·231 ⁵³	61·54 ¹⁹
16·1	28·052 ²⁶	44·96 ²⁴¹	23·815 ¹⁷	63·67 ⁹⁴	1·178 ²²	61·35 ⁰
26·0	28·026 ¹⁶	42·55 ²⁶⁵	23·798 ²⁰	62·73 ¹²⁰	1·156 ¹⁴	61·35 ²⁰
Oct. 6·0	28·042 ⁶⁵	39·90 ²⁸⁵	23·818 ⁶⁰	61·53 ¹⁴⁵	1·170 ⁵⁶	61·55 ⁴⁵
16·0	28·107 ¹¹⁷	37·05 ³⁰¹	23·878 ¹⁰⁵	60·08 ¹⁶⁸	1·226 ¹⁰⁰	62·00 ⁷¹
25·9	28·224 ¹⁶⁹	34·04 ³⁰⁹	23·983 ¹⁵⁰	58·40 ¹⁸⁹	1·326 ¹⁴⁷	62·71 ⁹⁷
Nov. 4·9	28·393 ²²¹	30·95 ³¹¹	24·133 ¹⁹⁴	56·51 ²⁰⁹	1·473 ¹⁹²	63·68 ¹²⁵
14·9	28·614 ²⁷¹	27·84 ³⁰⁵	24·327 ²³⁷	54·42 ²²²	1·665 ²³⁴	64·93 ¹⁵⁰
24·9	28·885 ³¹⁴	24·79 ²⁹⁰	24·564 ²⁷²	52·20 ²³¹	1·899 ²⁷⁰	66·43 ¹⁷²
Dec. 4·8	29·199 ³⁵⁰	21·89 ²⁶⁷	24·836 ³⁰¹	49·89 ²³⁴	2·169 ²⁹⁹	68·15 ¹⁸⁹
14·8	29·549 ³⁷³	19·22 ²³⁵	25·137 ³²⁰	47·55 ²²⁸	2·468 ³¹⁷	70·04 ²⁰²
24·8	29·922 ³⁸⁷	16·87 ¹⁹⁵	25·457 ³³⁰	45·27 ²¹⁵	2·785 ³²⁶	72·06 ²⁰⁸
34·8	30·309	14·92	25·787	43·12	3·111	74·14
Mean Place	28·525	42·65	23·619	62·25	0·761	61·11
Sec δ, Tan δ	1·282	+0·802	1·020	+0·201	1·004	—0·090
L α, L δ	0·00	—0·4	0·00	—0·4	0·00	—0·4
ω α, ω δ	+0·05	—0·2	+0·01	—0·2	—0·01	—0·3
AUTHORITY	A. E.		A. E.		A. E.	

APPARENT PLACES OF STARS, 1924. 361

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	γ Hydræ. Mag. 3.3			ϵ Centauri. Mag. 2.9			ζ^1 Ursæ Majoris. Mag. 2.4						
	R.A.		Dec. S.	R.A.		Dec. S.	R.A.		Dec. N.				
	^h 13	^m 14	[°] 22 ['] 46	^h 13	^m 16	[°] 36 ['] 18	^h 13	^m 20	[°] 55 ['] 18				
Jan.	0.8	46.660	344	3.45	189	18.644	381	26.34	168	50.577	483	67.26	166
	10.7	47.004	337	5.34	204	19.025	372	28.02	197	51.060	485	65.60	107
	20.7	47.341	319	7.38	211	19.397	352	29.99	219	51.545	470	64.53	45
	30.7	47.660	294	9.49	213	19.749	324	32.18	234	52.015	442	64.08	18
Feb.	9.7	47.954	262	11.62	209	20.073	289	34.52	243	52.457	399	64.26	79
	19.6	48.216	226	13.71	199	20.362	251	36.95	246	52.856	346	65.05	136
	29.6	48.442	189	15.70	186	20.613	208	39.41	243	53.202	284	66.41	185
Mar.	10.6	48.631	150	17.56	170	20.821	167	41.84	234	53.486	219	68.26	225
	20.6	48.781	114	19.26	151	20.988	126	44.18	223	53.705	150	70.51	256
	30.5	48.895	79	20.77	133	21.114	86	46.41	207	53.855	82	73.07	274
Apr.	9.5	48.974	45	22.10	112	21.200	49	48.48	189	53.937	19	75.81	283
	19.5	49.019	17	23.22	91	21.249	14	50.37	169	53.956	42	78.64	280
	29.4	49.036	12	24.13	72	21.263	18	52.06	145	53.914	96	81.44	267
May	9.4	49.024	36	24.85	51	21.245	48	53.51	121	53.818	144	84.11	245
	19.4	48.988	58	25.36	31	21.197	75	54.72	95	53.674	184	86.56	216
	29.4	48.930	79	25.67	12	21.122	99	55.67	66	53.490	218	88.72	179
June	8.3	48.851	97	25.79	8	21.023	121	56.33	38	53.272	244	90.51	137
	18.3	48.754	112	25.71	26	20.902	141	56.71	9	53.028	263	91.88	93
	28.3	48.642	124	25.45	45	20.761	155	56.80	21	52.765	274	92.81	46
July	8.3	48.518	133	25.00	61	20.606	166	56.59	50	52.491	280	93.27	3
	18.2	48.385	137	24.39	77	20.440	171	56.09	78	52.211	278	93.24	51
	28.2	48.248	137	23.62	90	20.269	170	55.31	104	51.933	269	92.73	99
Aug.	7.2	48.111	130	22.72	100	20.099	162	54.27	126	51.664	251	91.74	144
	17.1	47.981	118	21.72	107	19.937	147	53.01	144	51.413	228	90.30	188
	27.1	47.863	97	20.65	108	19.790	123	51.57	157	51.185	195	88.42	229
Sept.	6.1	47.766	70	19.57	106	19.667	91	50.00	163	50.990	154	86.13	264
	16.1	47.696	36	18.51	97	19.576	50	48.37	163	50.836	106	83.49	297
	26.0	47.660	4	17.54	83	19.526	3	46.74	155	50.730	51	80.52	322
Oct.	6.0	47.664	50	16.71	63	19.523	49	45.19	140	50.679	13	77.30	344
	16.0	47.714	99	16.08	38	19.572	106	43.79	117	50.692	79	73.86	356
	26.0	47.813	150	15.70	9	19.678	163	42.62	87	50.771	149	70.30	362
Nov.	4.9	47.963	200	15.61	25	19.841	219	41.75	51	50.920	221	66.68	359
	14.9	48.163	244	15.86	58	20.060	270	41.24	12	51.141	289	63.09	347
	24.9	48.407	284	16.44	93	20.330	314	41.12	30	51.430	352	59.62	325
Dec.	4.8	48.691	315	17.37	126	20.644	348	41.42	72	51.782	406	56.37	293
	14.8	49.006	336	18.63	154	20.992	370	42.14	112	52.188	449	53.44	252
	24.8	49.342	345	20.17	179	21.362	382	43.26	150	52.637	476	50.92	202
	34.8	49.687		21.96		21.744		44.76		53.113		48.90	
Mean Place	47.134		15.52			19.009		42.72		52.197		78.77	
Sec δ , Tan δ	1.085		-0.420			1.241		-0.735		1.758		+1.445	
L α , L δ	0.00		-0.4			+0.01		-0.4		-0.01		-0.4	
ω α , ω δ	-0.03		-0.3			-0.05		-0.3		+0.09		-0.3	
AUTHORITY	A. E.			A. E.			A. E.						

362 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	α Virginis. Mag. 1.2		ι Virginis. Mag. 5.6		ζ Virginis. Mag. 3.4	
	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.
	^h 13 ^s 21 ^m	[°] 10 ['] 45 ["]	^h 13 ^s 22 ^m	[°] 12 ['] 18 ["]	^h 13 ^s 30 ^m	[°] 0 ['] 12 ["]
Jan. 0.8	10.579 ³²⁹	45.92 ¹⁹⁹	41.457 ³³⁰	36.42 ¹⁹⁶	48.362 ³²¹	23.21 ²⁰⁵
10.8	10.908 ³²²	47.91 ²⁰⁰	41.787 ³²⁴	38.38 ²⁰¹	48.683 ³¹⁹	25.26 ¹⁹⁵
20.7	11.230 ³⁰⁸	49.91 ¹⁹⁵	42.111 ³⁰⁹	40.39 ¹⁹⁶	49.002 ³⁰⁶	27.21 ¹⁷⁹
30.7	11.538 ²⁸⁴	51.86 ¹⁸⁴	42.420 ²⁸⁵	42.35 ¹⁸⁷	49.308 ²⁸⁵	29.00 ¹⁵⁶
Feb. 9.7	11.822 ²⁵⁵	53.70 ¹⁶⁸	42.705 ²⁵⁷	44.22 ¹⁷³	49.593 ²⁵⁷	30.56 ¹³¹
19.7	12.077 ²²¹	55.38 ¹⁴⁹	42.962 ²²³	45.95 ¹⁵⁵	49.850 ²²⁶	31.87 ¹⁰³
29.6	12.298 ¹⁸⁶	56.87 ¹²⁷	43.185 ¹⁸⁷	47.50 ¹³⁵	50.076 ¹⁹²	32.90 ⁷⁴
Mar. 10.6	12.484 ¹⁵⁰	58.14 ¹⁰⁵	43.372 ¹⁵²	48.85 ¹¹²	50.268 ¹⁵⁶	33.64 ⁴⁵
20.6	12.634 ¹¹⁵	59.19 ⁸¹	43.524 ¹¹⁶	49.97 ⁹⁰	50.424 ¹²¹	34.09 ¹⁸
30.5	12.749 ⁸¹	60.00 ⁶⁰	43.640 ⁸³	50.87 ⁶⁹	50.545 ⁸⁸	34.27 ⁵
Apr. 9.5	12.830 ⁵⁰	60.60 ³⁹	43.723 ⁵³	51.56 ⁴⁸	50.633 ⁵⁷	34.22 ²⁵
19.5	12.880 ²²	60.99 ²¹	43.776 ²³	52.04 ³⁰	50.690 ²⁸	33.97 ⁴³
29.5	12.902 ⁴	61.20 ⁴	43.799 ³	52.34 ¹³	50.718 ²	33.54 ⁵⁵
May 9.4	12.898 ²⁸	61.24 ⁹	43.796 ²⁶	52.47 ²	50.720 ²²	32.99 ⁶⁴
19.4	12.870 ⁴⁸	61.15 ²³	43.770 ⁴⁸	52.45 ¹⁵	50.698 ⁴⁴	32.35 ⁷¹
29.4	12.822 ⁶⁸	60.92 ³⁴	43.722 ⁶⁷	52.30 ²⁸	50.654 ⁶³	31.64 ⁷³
June 8.4	12.754 ⁸⁵	60.58 ⁴³	43.655 ⁸⁵	52.02 ³⁸	50.591 ⁸⁰	30.91 ⁷⁴
18.3	12.669 ⁹⁹	60.15 ⁵²	43.570 ⁹⁹	51.64 ⁴⁸	50.511 ⁹⁵	30.17 ⁷²
28.3	12.570 ¹¹¹	59.63 ⁵⁸	43.471 ¹¹²	51.16 ⁵⁶	50.416 ¹⁰⁸	29.45 ⁶⁹
July 8.3	12.459 ¹²⁰	59.05 ⁶³	43.359 ¹²¹	50.60 ⁶²	50.308 ¹¹⁷	28.76 ⁶⁴
18.2	12.339 ¹²⁵	58.42 ⁶⁷	43.238 ¹²⁶	49.98 ⁶⁷	50.191 ¹²⁴	28.12 ⁵⁶
28.2	12.214 ¹²⁵	57.75 ⁶⁸	43.112 ¹²⁸	49.31 ⁷¹	50.067 ¹²⁴	27.56 ⁴⁸
Aug. 7.2	12.089 ¹²⁰	57.07 ⁶⁷	42.984 ¹²²	48.60 ⁷¹	49.943 ¹²²	27.08 ³⁷
17.2	11.969 ¹¹⁰	56.40 ⁶⁴	42.862 ¹¹³	47.89 ⁶⁹	49.821 ¹¹²	26.71 ²⁴
27.1	11.859 ⁹²	55.76 ⁵⁷	42.749 ⁹⁵	47.20 ⁶³	49.709 ⁹⁷	26.47 ¹⁰
Sept. 6.1	11.767 ⁶⁹	55.19 ⁴⁶	42.654 ⁷⁰	46.57 ⁵⁴	49.612 ⁷⁵	26.37 ⁸
16.1	11.698 ³⁷	54.73 ³¹	42.584 ⁴⁰	46.03 ⁴⁰	49.537 ⁴⁶	26.45 ²⁷
26.1	11.661 ¹	54.42 ¹⁴	42.544 ³	45.63 ²²	49.491 ¹¹	26.72 ⁴⁹
Oct. 6.0	11.660 ⁴¹	54.28 ⁹	42.541 ⁴⁰	45.41 ¹	49.480 ²⁹	27.21 ⁷²
16.0	11.701 ⁸⁸	54.37 ³⁴	42.581 ⁸⁶	45.40 ²⁴	49.509 ⁷⁴	27.93 ⁹⁸
26.0	11.789 ¹³⁵	54.71 ⁶²	42.667 ¹³⁴	45.64 ⁵²	49.583 ¹²¹	28.91 ¹²³
Nov. 4.9	11.924 ¹⁸²	55.33 ⁹⁰	42.801 ¹⁸²	46.16 ⁸¹	49.704 ¹⁶⁷	30.14 ¹⁴⁷
14.9	12.106 ²²⁶	56.23 ¹¹⁹	42.983 ²²⁶	46.97 ¹¹⁰	49.871 ²¹¹	31.61 ¹⁶⁹
24.9	12.332 ²⁶⁴	57.42 ¹⁴⁴	43.209 ²⁶⁵	48.07 ¹³⁷	50.082 ²⁵¹	33.30 ¹⁸⁸
Dec. 4.9	12.596 ²⁹⁶	58.86 ¹⁶⁶	43.474 ²⁹⁶	49.44 ¹⁶¹	50.333 ²⁸⁴	35.18 ²⁰²
14.8	12.892 ³¹⁷	60.52 ¹⁸⁵	43.770 ³¹⁹	51.05 ¹⁷⁹	50.617 ³⁰⁶	37.20 ²⁰⁹
24.8	13.209 ³²⁸	62.37 ¹⁹⁶	44.089 ³²⁹	52.84 ¹⁹⁴	50.923 ³²⁰	39.29 ²¹⁰
34.8	13.537	64.33	44.418	54.78	51.243	41.39
Mean Place	11.194	54.06	42.068	45.14	49.119	27.97
Sec δ , Tan δ	1.018	-0.190	1.024	-0.218	1.000	-0.004
L α , L δ	0.00	-0.4	0.00	-0.4	0.00	-0.4
ω α , ω δ	-0.01	-0.3	-0.01	-0.4	0.00	-0.4
AUTHORITY	A. E.				A. E.	

APPARENT PLACES OF STARS, 1924. 363

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	ϵ Centauri. Mag. 2.6		m Virginis. Mag. 5.2		τ Boötis. Mag. 4.5	
	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. N.
	^h 13 ^m 35	[°] 53 ['] 4	^h 13 ^m 37	[°] 8 ['] 19	^h 13 ^m 43	[°] 17 ['] 49
Jan.	0.8 3.222 481	29.51 113	36.488 325	4.41 196	38.029 327	64.87 215
	10.8 3.703 475	30.64 157	36.813 322	6.37 195	38.356 328	62.72 186
	20.7 4.178 457	32.21 195	37.135 311	8.32 188	38.684 318	60.86 152
	30.7 4.635 426	34.16 228	37.446 290	10.20 175	39.002 301	59.34 112
Feb.	9.7 5.061 387	36.44 253	37.736 263	11.95 157	39.303 274	58.22 70
	19.7 5.448 341	38.97 272	37.999 233	13.52 135	39.577 244	57.52 28
	29.6 5.789 292	41.69 284	38.232 199	14.87 113	39.821 208	57.24 13
Mar.	10.6 6.081 239	44.53 289	38.431 164	16.00 89	40.029 172	57.37 50
	20.6 6.320 188	47.42 288	38.595 130	16.89 65	40.201 135	57.87 83
	30.5 6.508 136	50.30 282	38.725 97	17.54 43	40.336 98	58.70 111
Apr.	9.5 6.644 85	53.12 271	38.822 66	17.97 22	40.434 64	59.81 130
	19.5 6.729 36	55.83 254	38.888 37	18.19 5	40.498 33	61.11 144
	29.5 6.765 11	58.37 233	38.925 11	18.24 11	40.531 3	62.55 151
May	9.4 6.754 55	60.70 209	38.936 14	18.13 23	40.534 24	64.06 152
	19.4 6.699 98	62.79 179	38.922 36	17.90 34	40.510 49	65.58 147
	29.4 6.601 137	64.58 146	38.886 56	17.56 42	40.461 70	67.05 137
June	8.4 6.464 172	66.04 111	38.830 77	17.14 50	40.391 89	68.42 123
	18.3 6.292 204	67.15 73	38.753 92	16.64 55	40.302 106	69.65 106
	28.3 6.088 230	67.88 32	38.661 107	16.09 58	40.196 120	70.71 86
July	8.3 5.858 248	68.20 9	38.554 118	15.51 61	40.076 130	71.57 63
	18.2 5.610 260	68.11 49	38.436 126	14.90 62	39.946 137	72.20 39
	28.2 5.350 262	67.62 89	38.310 129	14.28 61	39.809 140	72.59 14
Aug.	7.2 5.088 254	66.73 126	38.181 126	13.67 57	39.669 137	72.73 12
	17.2 4.834 235	65.47 160	38.055 119	13.10 53	39.532 130	72.61 40
	27.1 4.599 204	63.87 187	37.936 104	12.57 43	39.402 114	72.21 67
Sept.	6.1 4.395 162	62.00 209	37.832 81	12.14 33	39.288 94	71.54 95
	16.1 4.233 110	59.91 221	37.751 53	11.81 17	39.194 65	70.59 123
	26.1 4.123 47	57.70 226	37.698 17	11.64 1	39.129 31	69.36 150
Oct.	6.0 4.076 22	55.44 221	37.681 24	11.65 23	39.098 10	67.86 176
	16.0 4.098 99	53.23 205	37.705 71	11.88 47	39.108 54	66.10 201
	26.0 4.197 175	51.18 181	37.776 117	12.35 73	39.162 103	64.09 222
Nov.	4.9 4.372 249	49.37 148	37.893 165	13.08 100	39.265 151	61.87 241
	14.9 4.621 318	47.89 109	38.058 211	14.08 127	39.416 199	59.46 252
	24.9 4.939 377	46.80 62	38.269 252	15.35 149	39.615 241	56.94 259
Dec.	4.9 5.316 425	46.18 14	38.521 284	16.84 172	39.856 277	54.35 258
	14.8 5.741 459	46.04 36	38.805 309	18.56 186	40.133 305	51.77 249
	24.8 6.200 478	46.40 86	39.114 323	20.42 195	40.438 323	49.28 232
	34.8 6.678	47.26	39.437	22.37	40.761	46.96
Mean Place	3.613	50.65	37.221	12.16	39.027	65.72
Sec δ , Tan δ	1.665	-1.331	1.011	-0.146	1.050	+0.322
L α , L δ	+0.01	-0.4	0.00	-0.4	0.00	-0.4
ω α , ω δ	-0.08	-0.4	-0.01	-0.4	+0.02	-0.4
AUTHORITY	A. E.				A. E.	

364 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	η Ursæ Majoris. Mag. 1.9		μ Centauri. Mag. 3.3		ζ Centauri. Mag. 3.1	
	R.A.	Dec. N.	R.A.	Dec. S.	R.A.	Dec. S.
	^h 13 ^m 44	[°] 49 ['] 41	^h 13 ^m 45	[°] 42 ['] 5	^h 13 ^m 50	[°] 46 ['] 54
Jan. 0.8	31.322 ₄₂₆	22.12 ₂₀₀	1.214 ₄₀₆	25.64 ₁₂₈	46.715 ₄₃₄	34.31 ₁₁₀
10.8	31.748 ₄₃₅	20.12 ₁₄₆	1.620 ₄₀₃	26.92 ₁₆₂	47.149 ₄₃₂	35.41 ₁₄₉
20.7	32.183 ₄₂₇	18.66 ₈₅	2.023 ₃₉₀	28.54 ₁₉₂	47.581 ₄₁₉	36.90 ₁₈₂
30.7	32.610 ₄₀₈	17.81 ₂₄	2.413 ₃₆₆	30.46 ₂₁₅	48.000 ₃₉₅	38.72 ₂₁₁
Feb. 9.7	33.018 ₃₇₅	17.57 ₃₇	2.779 ₃₃₄	32.61 ₂₃₀	48.395 ₃₆₃	40.83 ₂₃₁
19.7	33.393 ₃₃₂	17.94 ₉₅	3.113 ₂₉₇	34.91 ₂₄₁	48.758 ₃₂₅	43.14 ₂₄₇
29.6	33.725 ₂₈₃	18.89 ₁₄₈	3.410 ₂₅₈	37.32 ₂₄₆	49.083 ₂₈₃	45.61 ₂₅₆
Mar. 10.6	34.008 ₂₂₉	20.37 ₁₉₃	3.668 ₂₁₅	39.78 ₂₄₅	49.366 ₂₃₈	48.17 ₂₅₉
20.6	34.237 ₁₇₁	22.30 ₂₂₉	3.883 ₁₇₃	42.23 ₂₃₉	49.604 ₁₉₃	50.76 ₂₅₈
30.5	34.408 ₁₁₃	24.59 ₂₅₄	4.056 ₁₃₂	44.62 ₂₂₉	49.797 ₁₄₉	53.34 ₂₅₀
Apr. 9.5	34.521 ₅₈	27.13 ₂₆₉	4.188 ₉₁	46.91 ₂₁₆	49.946 ₁₀₄	55.84 ₂₃₉
19.5	34.579 ₄	29.82 ₂₇₃	4.279 ₅₂	49.07 ₂₀₀	50.050 ₆₂	58.23 ₂₂₅
29.5	34.583 ₄₄	32.55 ₂₆₈	4.331 ₁₆	51.07 ₁₈₀	50.112 ₂₁	60.48 ₂₀₆
May 9.4	34.539 ₈₈	35.23 ₂₅₃	4.347 ₂₀	52.87 ₁₅₉	50.133 ₂₀	62.54 ₁₈₄
19.4	34.451 ₁₂₈	37.76 ₂₂₉	4.327 ₅₄	54.46 ₁₃₃	50.113 ₅₈	64.38 ₁₅₉
29.4	34.323 ₁₆₁	40.05 ₁₉₉	4.273 ₈₆	55.79 ₁₀₆	50.055 ₉₃	65.97 ₁₃₀
June 8.4	34.162 ₁₉₀	42.04 ₁₆₂	4.187 ₁₁₅	56.85 ₇₇	49.962 ₁₂₇	67.27 ₉₉
18.3	33.972 ₂₁₂	43.66 ₁₂₃	4.072 ₁₄₂	57.62 ₄₇	49.835 ₁₅₈	68.26 ₆₇
28.3	33.760 ₂₂₉	44.89 ₇₉	3.930 ₁₆₄	58.09 ₁₄	49.677 ₁₈₃	68.93 ₃₁
July 8.3	33.531 ₂₄₀	45.68 ₃₄	3.766 ₁₈₃	58.23 ₁₈	49.494 ₂₀₄	69.24 ₄
18.2	33.291 ₂₄₆	46.02 ₁₃	3.583 ₁₉₄	58.05 ₅₁	49.290 ₂₁₈	69.20 ₄₀
28.2	33.045 ₂₄₃	45.89 ₆₀	3.389 ₂₀₀	57.54 ₈₁	49.072 ₂₂₄	68.80 ₇₆
Aug. 7.2	32.802 ₂₃₅	45.29 ₁₀₅	3.189 ₁₉₆	56.73 ₁₁₀	48.848 ₂₂₂	68.04 ₁₀₇
17.2	32.567 ₂₂₀	44.24 ₁₄₉	2.993 ₁₈₅	55.63 ₁₃₅	48.626 ₂₁₀	66.97 ₁₃₇
27.1	32.347 ₁₉₅	42.75 ₁₉₀	2.808 ₁₆₃	54.28 ₁₅₅	48.416 ₁₅₇	65.60 ₁₆₂
Sept. 6.1	32.152 ₁₆₄	40.85 ₂₃₀	2.645 ₁₃₂	52.73 ₁₇₀	48.229 ₁₅₄	63.98 ₁₈₁
16.1	31.988 ₁₂₄	38.55 ₂₆₄	2.513 ₉₂	51.03 ₁₇₈	48.075 ₁₁₀	62.17 ₁₉₃
26.1	31.864 ₇₆	35.91 ₂₉₅	2.421 ₄₂	49.25 ₁₇₇	47.965 ₅₆	60.24 ₁₉₆
Oct. 6.0	31.788 ₂₂	32.96 ₃₂₁	2.379 ₁₄	47.48 ₁₆₉	47.909 ₄	58.28 ₁₉₂
16.0	31.766 ₃₉	29.75 ₃₄₀	2.393 ₇₆	45.79 ₁₅₃	47.913 ₇₀	56.36 ₁₇₈
26.0	31.805 ₁₀₂	26.35 ₃₅₁	2.469 ₁₃₉	44.26 ₁₂₉	47.983 ₁₃₉	54.58 ₁₅₆
Nov. 4.9	31.907 ₁₆₈	22.84 ₃₅₆	2.608 ₂₀₂	42.97 ₉₇	48.122 ₂₀₇	53.02 ₁₂₅
14.9	32.075 ₂₃₂	19.28 ₃₅₀	2.810 ₂₆₁	42.00 ₆₁	48.329 ₂₇₁	51.77 ₉₀
24.9	32.307 ₂₉₂	15.78 ₃₃₆	3.071 ₃₁₂	41.39 ₁₉	48.600 ₃₂₆	50.87 ₄₈
Dec. 4.9	32.599 ₃₄₅	12.42 ₃₁₁	3.383 ₃₅₄	41.20 ₂₃	48.926 ₃₇₄	50.39 ₃
14.8	32.944 ₃₈₇	9.31 ₂₇₇	3.737 ₃₈₅	41.43 ₆₅	49.300 ₄₀₇	50.36 ₄₂
24.8	33.331 ₄₁₈	6.54 ₂₃₄	4.122 ₄₀₃	42.08 ₁₀₇	49.707 ₄₂₉	50.78 ₈₆
34.8	33.749	4.20	4.525	43.15	50.136	51.64
Mean Place	32.913	31.41	1.785	44.15	47.321	54.14
Sec δ , Tan δ	1.546	+1.179	1.348	-0.903	1.464	-1.069
L α , L δ	-0.01	-0.4	+0.01	-0.4	+0.01	-0.4
ω α , ω δ	+0.07	-0.4	-0.05	-0.4	-0.06	-0.5
AUTHORITY	A. E.		A. N.		A. E.	

APPARENT PLACES OF STARS, 1924. 365

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	η Boötis. Mag. 2.8		τ Virginis. Mag. 4.3		β Centauri. Mag. 0.9	
	R. A.	Dec. N.	R. A.	Dec. N.	R. A.	Dec. S.
	^h 13 51 ^s	^m 18 46	^h 13 57 ^s	^m 1 54 ^s	^h 13 58 ^s	^m 60 0 ^s
Jan. 0.8	2.917 ³²⁷	40.36 ²¹⁹	45.703 ³¹⁷	46.95 ²⁰⁵	26.04 ⁵⁶	3.10 ⁶⁵
10.8	3.244 ³²⁹	38.17 ¹⁹⁰	46.020 ³²⁰	44.90 ¹⁹⁵	26.60 ⁵⁶	3.75 ¹¹⁴
20.8	3.573 ³²²	36.27 ¹⁵⁴	46.340 ³¹¹	42.95 ¹⁷⁶	27.16 ⁵⁵	4.89 ¹⁵⁹
30.7	3.895 ³⁰⁴	34.73 ¹¹⁴	46.651 ²⁹⁵	41.19 ¹⁵²	27.71 ⁵²	6.48 ¹⁹⁸
Feb. 9.7	4.199 ²⁸¹	33.59 ⁷²	46.946 ²⁷³	39.67 ¹²⁵	28.23 ⁴⁸	8.46 ²³¹
19.7	4.480 ²⁵⁰	32.87 ²⁷	47.219 ²⁴⁴	38.42 ⁹⁵	28.71 ⁴⁴	10.77 ²⁵⁹
29.7	4.730 ²¹⁶	32.60 ¹⁴	47.463 ²¹⁴	37.47 ⁶⁴	29.15 ³⁸	13.36 ²⁷⁸
Mar. 10.6	4.946 ¹⁸⁰	32.74 ⁵²	47.677 ¹⁸⁰	36.83 ³³	29.53 ³²	16.14 ²⁹²
20.6	5.126 ¹⁴³	33.26 ⁸⁷	47.857 ¹⁴⁷	36.50 ⁶	29.85 ²⁷	19.06 ²⁹⁸
30.6	5.269 ¹⁰⁷	34.13 ¹¹⁴	48.004 ¹¹⁵	36.44 ²⁰	30.12 ²⁰	22.04 ³⁰⁰
Apr. 9.5	5.376 ⁷²	35.27 ¹³⁵	48.119 ⁸⁴	36.64 ⁴¹	30.32 ¹⁴	25.04 ²⁹⁵
19.5	5.448 ⁴⁰	36.62 ¹⁴⁹	48.203 ⁵⁴	37.05 ⁵⁸	30.46 ⁸	27.99 ²⁸⁴
29.5	5.488 ¹⁰	38.11 ¹⁵⁶	48.257 ²⁶	37.63 ⁷¹	30.54 ³	30.83 ²⁶⁸
May 9.5	5.498 ¹⁸	39.67 ¹⁵⁸	48.283 ¹	38.34 ⁸⁰	30.57 ⁴	33.51 ²⁴⁷
19.4	5.480 ⁴³	41.25 ¹⁵²	48.284 ²⁴	39.14 ⁸⁴	30.53 ⁹	35.98 ²²⁰
29.4	5.437 ⁶⁵	42.77 ¹⁴²	48.260 ⁴⁶	39.98 ⁸⁵	30.44 ¹⁴	38.18 ¹⁹⁰
June 8.4	5.372 ⁸⁶	44.19 ¹²⁸	48.214 ⁶⁷	40.83 ⁸⁴	30.30 ²⁰	40.08 ¹⁵⁵
18.4	5.286 ¹⁰⁴	45.47 ¹¹⁰	48.147 ⁸⁵	41.67 ⁸⁰	30.10 ²⁴	41.63 ¹¹⁶
28.3	5.182 ¹¹⁹	46.57 ⁸⁹	48.062 ¹⁰²	42.47 ⁷⁴	29.86 ²⁷	42.79 ⁷⁵
July 8.3	5.063 ¹³¹	47.46 ⁶⁵	47.960 ¹¹⁶	43.21 ⁶⁶	29.59 ³¹	43.54 ³¹
18.3	4.932 ¹³⁹	48.11 ⁴⁰	47.844 ¹²⁶	43.87 ⁵⁶	29.28 ³³	43.85 ¹⁴
28.2	4.793 ¹⁴³	48.51 ¹⁴	47.718 ¹³²	44.43 ⁴⁵	28.95 ³³	43.71 ⁵⁸
Aug. 7.2	4.650 ¹⁴¹	48.65 ¹³	47.586 ¹³²	44.88 ³²	28.62 ³⁴	43.13 ¹⁰²
17.2	4.509 ¹³⁴	48.52 ⁴¹	47.454 ¹²⁷	45.20 ¹⁷	28.28 ³¹	42.11 ¹⁴¹
27.2	4.375 ¹²¹	48.11 ⁶⁹	47.327 ¹¹⁵	45.37 ¹	27.97 ²⁹	40.70 ¹⁷⁷
Sept. 6.1	4.254 ¹⁰⁰	47.42 ⁹⁸	47.212 ⁹⁷	45.38 ¹⁷	27.68 ²³	38.93 ²⁰⁷
16.1	4.154 ⁷²	46.44 ¹²⁷	47.115 ⁷⁰	45.21 ³⁸	27.45 ¹⁸	36.86 ²²⁹
26.1	4.082 ³⁹	45.17 ¹⁵⁵	47.045 ³⁷	44.83 ⁵⁹	27.27 ¹¹	34.57 ²⁴²
Oct. 6.1	4.043 ³	43.62 ¹⁸¹	47.008 ³	44.24 ⁸³	27.16 ²	32.15 ²⁴⁴
16.0	4.046 ⁴⁷	41.81 ²⁰⁶	47.011 ⁴⁶	43.41 ¹⁰⁸	27.14 ⁶	29.71 ²³⁸
26.0	4.093 ⁹⁵	39.75 ²²⁸	47.057 ⁹⁴	42.33 ¹³²	27.20 ¹⁶	27.33 ²²¹
Nov. 5.0	4.188 ¹⁴⁴	37.47 ²⁴⁶	47.151 ¹⁴²	41.01 ¹⁵⁵	27.36 ²⁴	25.12 ¹⁹³
14.9	4.332 ¹⁹²	35.01 ²⁵⁸	47.293 ¹⁸⁸	39.46 ¹⁷⁶	27.60 ³⁴	23.19 ¹⁵⁸
24.9	4.524 ²³⁶	32.43 ²⁶⁵	47.481 ²³¹	37.70 ¹⁹⁴	27.94 ⁴⁰	21.61 ¹¹⁵
Dec. 4.9	4.760 ²⁷⁴	29.78 ²⁶³	47.712 ²⁶⁶	35.76 ²⁰⁶	28.34 ⁴⁸	20.46 ⁶⁷
14.9	5.034 ³⁰³	27.15 ²⁵⁴	47.978 ²⁹⁵	33.70 ²¹³	28.82 ⁵¹	19.79 ¹⁷
24.8	5.337 ³²²	24.61 ²³⁶	48.273 ³¹³	31.57 ²¹²	29.33 ⁵⁵	19.62 ³⁶
34.8	5.659	22.25	48.586	29.45	29.88	19.98
Mean Place	3.965	41.22	46.629	42.11	26.71	25.82
Sec δ , Tan δ	1.056	+0.340	1.001	+0.033	2.000	-1.732
L α , L δ	0.00	-0.4	0.00	-0.3	+0.02	-0.3
ω α , ω δ	+0.02	-0.5	0.00	-0.5	-0.10	-0.5
AUTHORITY	A. E.		A. E.		A. E.	

366 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	π Hydræ. Mag. 3.5			θ Centauri. Mag. 2.3			94 Virginis. Mag. 6.6		
	R. A.		Dec. S.	R. A.		Dec. S.	R. A.		Dec. S.
	h 14	m 2	^o 26 18	h 14	m 2	^o 35 59	h 14	m 2	^o 8 31
Jan.	0.8	1.510 ₃₄₉	47.15 ₁₅₂	11.417 ₃₇₇	31.39 ₁₂₈	15.234 ₃₂₁	38.36 ₁₈₉		
	10.8	1.859 ₃₅₀	48.67 ₁₇₀	11.794 ₃₇₈	32.67 ₁₅₇	15.555 ₃₂₃	40.25 ₁₈₈		
	20.8	2.209 ₃₄₁	50.37 ₁₈₄	12.172 ₃₆₉	34.24 ₁₈₀	15.878 ₃₁₅	42.13 ₁₈₂		
	30.7	2.550 ₃₂₃	52.21 ₁₉₁	12.541 ₃₅₀	36.04 ₁₉₈	16.193 ₃₀₀	43.95 ₁₇₁		
Feb.	9.7	2.873 ₂₉₉	54.12 ₁₉₂	12.891 ₃₂₄	38.02 ₂₁₀	16.493 ₂₇₇	45.66 ₁₅₂		
	19.7	3.172 ₂₇₀	56.04 ₁₈₉	13.215 ₂₉₂	40.12 ₂₁₅	16.770 ₂₄₉	47.18 ₁₃₃		
	29.7	3.442 ₂₃₇	57.93 ₁₈₂	13.507 ₂₅₇	42.27 ₂₁₇	17.019 ₂₁₉	48.51 ₁₀₉		
Mar.	10.6	3.679 ₂₀₂	59.75 ₁₇₁	13.764 ₂₂₀	44.44 ₂₁₃	17.238 ₁₈₇	49.60 ₈₆		
	20.6	3.881 ₁₆₈	61.46 ₁₅₇	13.984 ₁₈₁	46.57 ₂₀₅	17.425 ₁₅₄	50.46 ₆₃		
	30.6	4.049 ₁₃₄	63.03 ₁₄₃	14.165 ₁₄₅	48.62 ₁₉₅	17.579 ₁₂₂	51.09 ₄₀		
Apr.	9.5	4.183 ₁₀₁	64.46 ₁₂₇	14.310 ₁₀₈	50.57 ₁₈₃	17.701 ₉₁	51.49 ₂₁		
	19.5	4.284 ₆₉	65.73 ₁₁₀	14.418 ₇₁	52.40 ₁₆₇	17.792 ₆₃	51.70 ₃		
	29.5	4.353 ₃₉	66.83 ₉₄	14.489 ₃₈	54.07 ₁₄₉	17.855 ₃₄	51.73 ₁₂		
May	9.5	4.392 ₉	67.77 ₇₆	14.527 ₅	55.56 ₁₃₁	17.889 ₉	51.61 ₂₄		
	19.4	4.401 ₁₉	68.53 ₅₈	14.532 ₂₈	56.87 ₁₁₀	17.898 ₁₆	51.37 ₃₄		
	29.4	4.382 ₄₆	69.11 ₄₁	14.504 ₅₈	57.97 ₈₇	17.882 ₄₀	51.03 ₄₂		
June	8.4	4.336 ₇₁	69.52 ₂₃	14.446 ₈₈	58.84 ₆₄	17.842 ₆₂	50.61 ₄₈		
	18.4	4.265 ₉₅	69.75 ₄	14.358 ₁₁₄	59.48 ₃₈	17.780 ₈₂	50.13 ₅₂		
	28.3	4.170 ₁₁₆	69.79 ₁₄	14.244 ₁₃₇	59.86 ₁₂	17.698 ₁₀₁	49.61 ₅₅		
July	8.3	4.054 ₁₃₃	69.65 ₃₂	14.107 ₁₅₈	59.98 ₁₄	17.597 ₁₁₆	49.06 ₅₇		
	18.3	3.921 ₁₄₇	69.33 ₅₀	13.949 ₁₇₂	59.84 ₄₁	17.481 ₁₂₇	48.49 ₅₈		
	28.2	3.774 ₁₅₅	68.83 ₆₇	13.777 ₁₈₀	59.43 ₆₆	17.354 ₁₃₄	47.91 ₅₆		
Aug.	7.2	3.619 ₁₅₆	68.16 ₈₀	13.597 ₁₈₂	58.77 ₈₉	17.220 ₁₃₆	47.35 ₅₄		
	17.2	3.463 ₁₅₁	67.36 ₉₃	13.415 ₁₇₄	57.88 ₁₁₀	17.084 ₁₃₂	46.81 ₄₈		
	27.2	3.312 ₁₃₇	66.43 ₁₀₀	13.241 ₁₅₉	56.78 ₁₂₇	16.952 ₁₁₉	46.33 ₄₁		
Sept.	6.1	3.175 ₁₁₅	65.43 ₁₀₄	13.082 ₁₃₃	55.51 ₁₃₈	16.833 ₁₀₂	45.92 ₃₀		
	16.1	3.060 ₈₄	64.39 ₁₀₃	12.949 ₉₉	54.13 ₁₄₄	16.731 ₇₄	45.62 ₁₇		
	26.1	2.976 ₄₆	63.36 ₉₆	12.850 ₅₅	52.69 ₁₄₃	16.657 ₄₀	45.45 ₁		
Oct.	6.1	2.930 ₀	62.40 ₈₃	12.795 ₅	51.26 ₁₃₄	16.617 ₀	45.46 ₂₀		
	16.0	2.930 ₅₀	61.57 ₆₅	12.790 ₅₁	49.92 ₁₂₀	16.617 ₄₆	45.66 ₄₂		
	26.0	2.980 ₁₀₄	60.92 ₄₂	12.841 ₁₁₀	48.72 ₉₈	16.663 ₉₃	46.08 ₆₈		
Nov.	5.0	3.084 ₁₅₈	60.50 ₁₃	12.951 ₁₇₀	47.74 ₆₉	16.756 ₁₄₃	46.76 ₉₄		
	14.9	3.242 ₂₁₀	60.37 ₁₈	13.121 ₂₂₆	47.05 ₃₆	16.899 ₁₉₀	47.70 ₁₁₈		
	24.9	3.452 ₂₅₆	60.55 ₅₀	13.347 ₂₇₆	46.69 ₁	17.089 ₂₃₄	48.88 ₁₄₂		
Dec.	4.9	3.708 ₂₉₆	61.05 ₈₂	13.623 ₃₁₈	46.68 ₃₈	17.323 ₂₆₉	50.30 ₁₆₃		
	14.9	4.004 ₃₂₅	61.87 ₁₁₃	13.941 ₃₅₁	47.06 ₇₅	17.592 ₂₉₈	51.93 ₁₇₈		
	24.8	4.329 ₃₄₄	63.00 ₁₃₉	14.292 ₃₇₁	47.81 ₁₀₉	17.890 ₃₁₇	53.71 ₁₈₈		
	34.8	4.673	64.39	14.663	48.90	18.207	55.59		
Mean Place	2.294	61.29		12.168	48.41	16.112	46.79		
Sec δ , Tan δ	1.116	-0.495		1.236	-0.727	1.011	-0.150		
L α , L δ	+0.01	-0.3		+0.01	-0.3	0.00	-0.3		
ω α , ω δ	-0.03	-0.5		-0.04	-0.5	-0.01	-0.5		
AUTHORITY	A. N.			A. E.					

APPARENT PLACES OF STARS, 1924. 367

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	α Draconis. Mag. 3.6			κ Virginis. Mag. 4.3			α Boötis. Mag. 0.2		
	R. A.		Dec. N.	R. A.		Dec. S.	R. A.		Dec. N.
	^h 14	^m 2	[°] 64 ['] 43	^h 14	^m 8	[°] 9 ['] 55	^h 14	^m 12	[°] 19 ['] 34
Jan.	0.8	17.43 ⁵⁸	68.49 ¹⁹⁹	49.428 ³²¹	5.41 ¹⁸⁴	10.485 ³¹⁸	38.40 ²³²		
	10.8	18.01 ⁶⁰	66.50 ¹³⁸	49.749 ³²⁴	7.25 ¹⁸⁵	10.803 ³²⁶	36.08 ²⁰³		
	20.8	18.61 ⁶⁰	65.12 ⁷⁴	50.073 ³¹⁷	9.10 ¹⁸⁰	11.129 ³²²	34.05 ¹⁶⁷		
	30.7	19.21 ⁵⁸	64.38 ⁶	50.390 ³⁰³	10.90 ¹⁷⁰	11.451 ³¹⁰	32.38 ¹²⁶		
Feb.	9.7	19.79 ⁵⁵	64.32 ⁶⁰	50.693 ²⁸²	12.60 ¹⁵⁵	11.761 ²⁸⁹	31.12 ⁸²		
	19.7	20.34 ⁵⁰	64.92 ¹²²	50.975 ²⁵⁴	14.15 ¹³⁵	12.050 ²⁶¹	30.30 ³⁸		
	29.7	20.84 ⁴³	66.14 ¹⁷⁹	51.229 ²²⁵	15.50 ¹¹⁴	12.311 ²³¹	29.92 ⁷		
Mar.	10.6	21.27 ³⁵	67.93 ²²⁶	51.454 ¹⁹³	16.64 ⁹¹	12.542 ¹⁹⁶	29.99 ⁴⁶		
	20.6	21.62 ²⁷	70.19 ²⁶³	51.647 ¹⁶¹	17.55 ⁶⁹	12.738 ¹⁶¹	30.45 ⁸³		
	30.6	21.89 ¹⁸	72.82 ²⁹⁰	51.808 ¹³⁰	18.24 ⁴⁷	12.899 ¹²⁶	31.28 ¹¹³		
Apr.	9.5	22.07 ⁹	75.72 ³⁰⁵	51.938 ⁹⁸	18.71 ²⁷	13.025 ⁹²	32.41 ¹³⁶		
	19.5	22.16 ⁰	78.77 ³⁰⁸	52.036 ⁷⁰	18.98 ¹¹	13.117 ⁵⁹	33.77 ¹⁵²		
	29.5	22.16 ⁸	81.85 ³⁰⁰	52.106 ⁴²	19.09 ⁵	13.176 ²⁸	35.29 ¹⁶¹		
May	9.5	22.08 ¹⁵	84.85 ²⁸²	52.148 ¹⁴	19.04 ¹⁷	13.204 ¹	36.90 ¹⁶⁴		
	19.4	21.93 ²²	87.67 ²⁵⁵	52.162 ¹¹	18.87 ²⁸	13.203 ²⁹	38.54 ¹⁵⁹		
	29.4	21.71 ²⁸	90.22 ²¹⁹	52.151 ³⁵	18.59 ³⁶	13.174 ⁵⁵	40.13 ¹⁵⁰		
June	8.4	21.43 ³²	92.41 ¹⁷⁸	52.116 ⁵⁸	18.23 ⁴³	13.119 ⁷⁸	41.63 ¹³⁶		
	18.4	21.11 ³⁷	94.19 ¹³³	52.058 ⁸⁰	17.80 ⁴⁸	13.041 ⁹⁹	42.99 ¹¹⁷		
	28.3	20.74 ⁴⁰	95.52 ⁸³	51.978 ⁹⁸	17.32 ⁵²	12.942 ¹¹⁷	44.16 ⁹⁶		
July	8.3	20.34 ⁴²	96.35 ³¹	51.880 ¹¹⁵	16.80 ⁵⁵	12.825 ¹³³	45.12 ⁷²		
	18.3	19.92 ⁴³	96.66 ²⁰	51.765 ¹²⁸	16.25 ⁵⁷	12.692 ¹⁴⁴	45.84 ⁴⁶		
	28.2	19.49 ⁴²	96.46 ⁷³	51.637 ¹³⁶	15.68 ⁵⁷	12.548 ¹⁵²	46.30 ¹⁸		
Aug.	7.2	19.07 ⁴²	95.73 ¹²⁴	51.501 ¹³⁸	15.11 ⁵⁴	12.396 ¹⁵³	46.48 ¹⁰		
	17.2	18.65 ³⁹	94.49 ¹⁷²	51.363 ¹³⁵	14.57 ⁵¹	12.243 ¹⁵⁰	46.38 ³⁹		
	27.2	18.26 ³⁶	92.77 ²¹⁷	51.228 ¹²⁵	14.06 ⁴⁵	12.093 ¹³⁸	45.99 ⁶⁹		
Sept.	6.1	17.90 ³¹	90.60 ²⁵⁹	51.103 ¹⁰⁵	13.61 ³⁶	11.955 ¹²¹	45.30 ⁹⁹		
	16.1	17.59 ²⁵	88.01 ²⁹⁷	50.998 ⁸⁰	13.25 ²³	11.834 ⁹⁵	44.31 ¹²⁹		
	26.1	17.34 ¹⁹	85.04 ³²⁷	50.918 ⁴⁶	13.02 ⁸	11.739 ⁶²	43.02 ¹⁵⁸		
Oct.	6.1	17.15 ¹¹	81.77 ³⁵³	50.872 ⁷	12.94 ¹²	11.677 ²²	41.44 ¹⁸⁵		
	16.0	17.04 ²	78.24 ³⁷²	50.865 ⁴⁰	13.06 ³⁴	11.655 ²⁰	39.59 ²¹¹		
	26.0	17.02 ⁶	74.52 ³⁸¹	50.905 ⁸⁷	13.40 ⁵⁷	11.675 ⁷⁰	37.48 ²³⁵		
Nov.	5.0	17.08 ¹⁶	70.71 ³⁸²	50.992 ¹³⁸	13.97 ⁸⁴	11.745 ¹²⁰	35.13 ²⁵³		
	14.9	17.24 ²⁶	66.89 ³⁷³	51.130 ¹⁸⁵	14.81 ¹⁰⁸	11.865 ¹⁷⁰	32.60 ²⁶⁷		
	24.9	17.50 ³⁵	63.16 ³⁵⁵	51.315 ²²⁹	15.89 ¹³³	12.035 ²¹⁵	29.93 ²⁷⁴		
Dec.	4.9	17.85 ⁴³	59.61 ³²⁴	51.544 ²⁶⁶	17.22 ¹⁵³	12.250 ²⁵⁶	27.19 ²⁷⁴		
	14.9	18.28 ⁵⁰	56.37 ²⁸⁵	51.810 ²⁹⁷	18.75 ¹⁷¹	12.506 ²⁸⁸	24.45 ²⁶⁶		
	24.8	18.78 ⁵⁵	53.52 ²³⁸	52.107 ³¹⁵	20.46 ¹⁸²	12.794 ³¹²	21.79 ²⁴⁹		
	34.8	19.33 ⁵⁵	51.14 ²³⁸	52.422 ³¹⁵	22.28 ¹⁸²	13.106 ³¹²	19.30 ²⁴⁹		
Mean Place		19.93	79.27	50.338	14.44	11.650	38.70		
Sec δ , Tan δ		2.343	+2.119	1.015	-0.175	1.061	+0.356		
L α , L δ		-0.03	-0.3	0.00	-0.3	-0.01	-0.3		
ω α , ω δ		+0.12	-0.5	-0.01	-0.5	+0.02	-0.5		
AUTHORITY		A. E.		A. E.		A. E.			

368 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	2 Libræ. Mag. 6.3		f Boötis. Mag. 5.4		ρ Boötis. Mag. 3.8	
	R. A.	Dec. S.	R. A.	Dec. N.	R. A.	Dec. N.
	^h 14 ^m 19	[°] 11 ['] 21	^h 14 ^m 22	[°] 19 ['] 33	^h 14 ^m 28	[°] 30 ['] 41
Jan. 0.8	19.086 ³²⁰	53.91 ¹⁷⁷	54.016 ³¹⁷	64.36 ²³⁰	31.916 ³³¹	72.89 ²⁴²
10.8	19.406 ³²⁴	55.68 ¹⁸¹	54.333 ³²⁶	62.06 ²⁰²	32.247 ³⁴³	70.47 ²⁰⁴
20.8	19.730 ³²⁰	57.49 ¹⁷⁷	54.659 ³²⁴	60.04 ¹⁶⁶	32.590 ³⁴⁵	68.43 ¹⁵⁸
30.7	20.050 ³⁰⁷	59.26 ¹⁶⁹	54.983 ³¹³	58.38 ¹²⁶	32.935 ³³⁵	66.85 ¹⁰⁸
Feb. 9.7	20.357 ²⁸⁷	60.95 ¹⁵⁵	55.296 ²⁹⁴	57.12 ⁸¹	33.270 ³¹⁷	65.77 ⁵⁶
19.7	20.644 ²⁶¹	62.50 ¹³⁷	55.590 ²⁷⁰	56.31 ³⁷	33.587 ²⁹²	65.21 ³
29.7	20.905 ²³³	63.87 ¹¹⁸	55.860 ²⁴⁰	55.94 ⁸	33.879 ²⁶¹	65.18 ⁴⁹
Mar. 10.6	21.138 ²⁰³	65.05 ⁹⁶	56.100 ²⁰⁷	56.02 ⁵⁰	34.140 ²²⁵	65.67 ⁹⁶
20.6	21.341 ¹⁷¹	66.01 ⁷⁵	56.307 ¹⁷²	56.52 ⁸⁶	34.365 ¹⁸⁸	66.63 ¹³⁷
30.6	21.512 ¹⁴¹	66.76 ⁵⁴	56.479 ¹³⁹	57.38 ¹¹⁸	34.553 ¹⁵⁰	68.00 ¹⁷⁰
Apr. 9.6	21.653 ¹¹¹	67.30 ³⁴	56.618 ¹⁰⁴	58.56 ¹⁴²	34.703 ¹¹¹	69.70 ¹⁹⁶
19.5	21.764 ⁷⁹	67.64 ¹⁸	56.722 ⁷²	59.98 ¹⁵⁹	34.814 ⁷³	71.66 ²¹³
29.5	21.843 ⁵³	67.82 ³	56.794 ⁴⁰	61.57 ¹⁷⁰	34.887 ³⁸	73.79 ²²⁰
May 9.5	21.896 ²⁵	67.85 ⁹	56.834 ¹¹	63.27 ¹⁷²	34.925 ³	75.99 ²²¹
19.4	21.921 ²	67.76 ²⁰	56.845 ¹⁸	64.99 ¹⁶⁹	34.928 ²⁹	78.20 ²¹²
29.4	21.919 ²⁶	67.56 ²⁹	56.827 ⁴⁴	66.68 ¹⁶⁰	34.899 ⁵⁹	80.32 ¹⁹⁸
June 8.4	21.893 ⁵²	67.27 ³⁶	56.783 ⁷⁰	68.28 ¹⁴⁶	34.840 ⁸⁸	82.30 ¹⁷⁸
18.4	21.841 ⁷⁴	66.91 ⁴²	56.713 ⁹²	69.74 ¹²⁹	34.752 ¹¹²	84.08 ¹⁵²
28.3	21.767 ⁹⁶	66.49 ⁴⁷	56.621 ¹¹¹	71.03 ¹⁰⁶	34.640 ¹³⁴	85.60 ¹²²
July 8.3	21.671 ¹¹³	66.02 ⁵¹	56.510 ¹³⁰	72.09 ⁸⁴	34.506 ¹⁵³	86.82 ⁹⁰
18.3	21.558 ¹²⁸	65.51 ⁵³	56.380 ¹⁴²	72.93 ⁵⁶	34.353 ¹⁶⁷	87.72 ⁵⁵
28.3	21.430 ¹³⁸	64.98 ⁵⁴	56.238 ¹⁵²	73.49 ³⁰	34.186 ¹⁷⁷	88.27 ¹⁸
Aug. 7.2	21.292 ¹⁴³	64.44 ⁵⁴	56.086 ¹⁵⁶	73.79 ⁰	34.009 ¹⁸⁰	88.45 ¹⁸
17.2	21.149 ¹⁴¹	63.90 ⁵²	55.930 ¹⁵³	73.79 ²⁸	33.829 ¹⁷⁸	88.27 ⁵⁶
27.2	21.008 ¹³²	63.38 ⁴⁸	55.777 ¹⁴⁴	73.51 ⁵⁹	33.651 ¹⁶⁸	87.71 ⁹³
Sept. 6.1	20.876 ¹¹⁴	62.90 ³⁹	55.633 ¹²⁷	72.92 ⁸⁹	33.483 ¹⁵⁰	86.78 ¹³⁰
16.1	20.762 ⁸⁹	62.51 ²⁹	55.506 ¹⁰³	72.03 ¹¹⁹	33.333 ¹²⁵	85.48 ¹⁶⁵
26.1	20.673 ⁵⁷	62.22 ¹⁴	55.403 ⁷¹	70.84 ¹⁴⁹	33.208 ⁹¹	83.83 ¹⁹⁸
Oct. 6.1	20.616 ¹⁵	62.08 ³	55.332 ³³	69.35 ¹⁷⁶	33.117 ⁵¹	81.85 ²²⁹
16.0	20.601 ²⁹	62.11 ²⁴	55.299 ¹²	67.59 ²⁰⁴	33.066 ⁴	79.56 ²⁵⁷
26.0	20.630 ⁷⁸	62.35 ⁴⁸	55.311 ⁶⁰	65.55 ²²⁷	33.062 ⁴⁷	76.99 ²⁷⁹
Nov. 5.0	20.708 ¹²⁸	62.83 ⁷²	55.371 ¹¹⁰	63.28 ²⁴⁷	33.109 ¹⁰¹	74.20 ²⁹⁷
15.0	20.836 ¹⁷⁷	63.55 ⁹⁸	55.481 ¹⁶¹	60.81 ²⁶¹	33.210 ¹⁵⁵	71.23 ³⁰⁷
24.9	21.013 ²²²	64.53 ¹²²	55.642 ²⁰⁸	58.20 ²⁷⁰	33.365 ²⁰⁶	68.16 ³¹⁰
Dec. 4.9	21.235 ²⁶¹	65.75 ¹⁴⁴	55.850 ²⁵⁰	55.50 ²⁷⁰	33.571 ²⁵²	65.06 ³⁰⁴
14.9	21.496 ²⁹²	67.19 ¹⁶²	56.100 ²⁸³	52.80 ²⁶³	33.823 ²⁹¹	62.02 ²⁸⁹
24.8	21.788 ³¹³	68.81 ¹⁷⁵	56.383 ³⁰⁸	50.17 ²⁴⁷	34.114 ³²⁰	59.13 ²⁶⁴
34.8	22.101	70.56	56.691	47.70	34.434	56.49
Mean Place	20.049	63.60	55.234	64.25	33.313	75.61
Sec δ, Tan δ	1.020	-0.201	1.061	+0.355	1.163	+0.594
L α, L δ	0.00	-0.3	-0.01	-0.3	-0.01	-0.3
ω α, ω δ	-0.01	-0.6	+0.02	-0.6	+0.03	-0.6
AUTHORITY					A. E.	

APPARENT PLACES OF STARS, 1924. 369

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	γ Boötis. Mag. 3.0		η Centauri. Mag. 2.7		α Centauri. Mag. 0.3	
	R. A.	Dec. N.	R. A.	Dec. S.	R. A.	Dec. S.
	^h ^m 14 28	[°] ['] 38 38	^h ^m 14 30	[°] ['] 41 49	^h ^m 14 34	[°] ['] 60 30
Jan. 0.8	59.570 ³⁵¹	19.54 ²⁴⁵	39.425 ³⁹⁶	10.69 ⁸¹	24.89 ⁵⁵	54.90 ²⁵
10.8	59.921 ³⁶⁶	17.09 ²⁰¹	39.821 ⁴⁰⁴	11.50 ¹¹⁶	25.44 ⁵⁶	55.15 ⁷³
20.8	60.287 ³⁶⁹	15.08 ¹⁴⁹	40.225 ⁴⁰²	12.66 ¹⁴⁵	26.00 ⁵⁶	55.88 ¹¹⁸
30.8	60.656 ³⁶⁰	13.59 ⁹³	40.627 ³⁸⁸	14.11 ¹⁶⁹	26.56 ⁵⁴	57.06 ¹⁵⁸
Feb. 9.7	61.016 ³⁴²	12.66 ³⁶	41.015 ³⁶⁶	15.80 ¹⁸⁸	27.10 ⁵¹	58.64 ¹⁹⁴
19.7	61.358 ³¹⁵	12.30 ²²	41.381 ³³⁸	17.68 ²⁰²	27.61 ⁴⁷	60.58 ²²⁴
29.7	61.673 ²⁸¹	12.52 ⁷⁷	41.719 ³⁰⁵	19.70 ²¹⁰	28.08 ⁴²	62.82 ²⁴⁷
Mar. 10.6	61.954 ²⁴²	13.29 ¹²⁶	42.024 ²⁶⁹	21.80 ²¹⁴	28.50 ³⁶	65.29 ²⁶⁵
20.6	62.196 ²⁰¹	14.55 ¹⁷⁰	42.293 ²³²	23.94 ²¹⁴	28.86 ³¹	67.94 ²⁷⁶
30.6	62.397 ¹⁵⁷	16.25 ²⁰⁴	42.525 ¹⁹³	26.08 ²¹⁰	29.17 ²⁶	70.70 ²⁸²
Apr. 9.6	62.554 ¹¹⁴	18.29 ²²⁹	42.718 ¹⁵⁴	28.18 ²⁰²	29.43 ¹⁹	73.52 ²⁸²
19.5	62.668 ⁷¹	20.58 ²⁴⁵	42.872 ¹¹⁶	30.20 ¹⁹²	29.62 ¹³	76.34 ²⁷⁶
29.5	62.739 ³¹	23.03 ²⁵¹	42.988 ⁷⁷	32.12 ¹⁷⁹	29.75 ⁶	79.10 ²⁶⁶
May 9.5	62.770 ⁹	25.54 ²⁴⁸	43.065 ³⁹	33.91 ¹⁶³	29.81 ¹	81.76 ²⁵⁰
19.5	62.761 ⁴⁵	28.02 ²³⁷	43.104 ¹	35.54 ¹⁴⁵	29.82 ⁵	84.26 ²³⁰
29.4	62.716 ⁷⁸	30.39 ²¹⁷	43.105 ³⁷	36.99 ¹²⁴	29.77 ¹²	86.56 ²⁰³
June 8.4	62.638 ¹⁰⁹	32.56 ¹⁹²	43.068 ⁷²	38.23 ¹⁰¹	29.65 ¹⁷	88.59 ¹⁷⁴
18.4	62.529 ¹³⁷	34.48 ¹⁶²	42.996 ¹⁰⁷	39.24 ⁷⁵	29.48 ²²	90.33 ¹³⁹
28.3	62.392 ¹⁶¹	36.10 ¹²⁸	42.889 ¹³⁸	39.99 ⁴⁸	29.26 ²⁷	91.72 ¹⁰⁰
July 8.3	62.231 ¹⁷⁹	37.38 ⁸⁹	42.751 ¹⁶⁵	40.47 ¹⁸	28.99 ³¹	92.72 ⁶¹
18.3	62.052 ¹⁹⁵	38.27 ⁴⁹	42.586 ¹⁸⁷	40.65 ¹¹	28.68 ³³	93.33 ¹⁸
28.3	61.857 ²⁰⁴	38.76 ⁸	42.399 ²⁰²	40.54 ⁴⁰	28.35 ³⁶	93.51 ²⁶
Aug. 7.2	61.653 ²⁰⁶	38.84 ³⁵	42.197 ²⁰⁹	40.14 ⁷⁰	27.99 ³⁶	93.25 ⁶⁹
17.2	61.447 ²⁰⁴	38.49 ⁷⁷	41.988 ²⁰⁸	39.44 ⁹⁶	27.63 ³⁶	92.56 ¹¹¹
27.2	61.243 ¹⁹¹	37.72 ¹¹⁷	41.780 ¹⁹⁵	38.48 ¹²⁰	27.27 ³³	91.45 ¹⁴⁹
Sept. 6.2	61.052 ¹⁷²	36.55 ¹⁵⁸	41.585 ¹⁷²	37.28 ¹⁴⁰	26.94 ²⁹	89.96 ¹⁸³
16.1	60.880 ¹⁴⁵	34.97 ¹⁹⁶	41.413 ¹³⁸	35.88 ¹⁵³	26.65 ²⁴	88.13 ²⁰⁹
26.1	60.735 ¹⁰⁸	33.01 ²³¹	41.275 ⁹⁵	34.35 ¹⁶⁰	26.41 ¹⁷	86.04 ²²⁸
Oct. 6.1	60.627 ⁶⁵	30.70 ²⁶³	41.180 ⁴²	32.75 ¹⁶⁰	26.24 ⁹	83.76 ²³⁸
16.0	60.562 ¹⁴	28.07 ²⁹⁰	41.138 ¹⁷	31.15 ¹⁵²	26.15 ⁰	81.38 ²³⁸
26.0	60.548 ⁴⁰	25.17 ³¹²	41.155 ⁸¹	29.63 ¹³⁷	26.15 ⁹	79.00 ²²⁸
Nov. 5.0	60.588 ⁹⁹	22.05 ³²⁶	41.236 ¹⁴⁷	28.26 ¹¹⁴	26.24 ¹⁹	76.72 ²⁰⁸
15.0	60.687 ¹⁵⁶	18.79 ³³⁵	41.383 ²¹⁰	27.12 ⁸⁶	26.43 ²⁸	74.64 ¹⁸⁰
24.9	60.843 ²¹²	15.44 ³³²	41.593 ²⁶⁷	26.26 ⁵¹	26.71 ³⁷	72.84 ¹⁴²
Dec. 4.9	61.055 ²⁶³	12.12 ³²³	41.860 ³¹⁸	25.75 ¹⁵	27.08 ⁴³	71.42 ¹⁰⁰
14.9	61.318 ³⁰⁵	8.89 ³⁰¹	42.178 ³⁵⁸	25.60 ²⁴	27.51 ⁴⁹	70.42 ⁵²
24.9	61.623 ³³⁸	5.88 ²⁷⁰	42.536 ³⁸⁶	25.84 ⁶²	28.00 ⁵³	69.90 ³
34.8	61.961	3.18	42.922	26.46	28.53	69.87
Mean Place	61.119	24.18	40.417	29.29	25.46	81.39
Sec δ , Tan δ	1.280	+0.799	1.342	-0.895	2.032	-1.769
L α , L δ	-0.01	-0.3	+0.01	-0.3	+0.03	-0.3
ω α , ω δ	+0.04	-0.6	-0.05	-0.6	-0.09	-0.6
AUTHORITY	A. E.		A. E.		A. E.	

370 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	α Circini. Mag. 3.4		α Lupi.. Mag. 2.9		ϵ Boötis. Mag. 2.7	
	R. A.	Dec. S.	R. A.	Dec. S.	R. A.	Dec. N.
	^h 14 ^m 36 ^s	[°] 64 ['] 38 ["]	^h 14 ^m 36 ^s	[°] 47 ['] 3 ["]	^h 14 ^m 41 ^s	[°] 27 ['] 23 ["]
Jan. 0.8	19.27 ₆₂	19.88 ₂	50.872 ₄₂₃	27.25 ₅₈	38.670 ₃₁₈	36.46 ₂₄₆
10.8	19.89 ₆₄	19.90 ₅₁	51.295 ₄₃₄	27.83 ₉₆	38.988 ₃₃₂	34.00 ₂₁₁
20.8	20.53 ₆₄	20.41 ₉₉	51.729 ₄₃₂	28.79 ₁₃₀	39.320 ₃₃₆	31.89 ₁₇₁
30.8	21.17 ₆₃	21.40 ₁₄₄	52.161 ₄₂₁	30.09 ₁₅₉	39.656 ₃₂₈	30.18 ₁₂₃
Feb. 9.7	21.80 ₅₉	22.84 ₁₈₄	52.582 ₃₉₈	31.68 ₁₈₄	39.984 ₃₁₅	28.95 ₇₃
19.7	22.39 ₅₅	24.68 ₂₁₇	52.980 ₃₆₉	33.52 ₂₀₂	40.299 ₂₉₁	28.22 ₂₀
29.7	22.94 ₅₁	26.85 ₂₄₅	53.349 ₃₃₆	35.54 ₂₁₇	40.590 ₂₆₃	28.02 ₂₉
Mar. 10.6	23.45 ₄₅	29.30 ₂₆₇	53.685 ₂₉₈	37.71 ₂₂₅	40.853 ₂₃₀	28.31 ₇₆
20.6	23.90 ₃₈	31.97 ₂₈₃	53.983 ₂₅₇	39.96 ₂₂₉	41.083 ₁₉₆	29.07 ₁₁₈
30.6	24.28 ₃₂	34.80 ₂₉₃	54.240 ₂₁₇	42.25 ₂₂₉	41.279 ₁₆₁	30.25 ₁₅₃
Apr. 9.6	24.60 ₂₅	37.73 ₂₉₆	54.457 ₁₇₅	44.54 ₂₂₄	41.440 ₁₂₄	31.78 ₁₇₉
19.5	24.85 ₁₈	40.69 ₂₉₅	54.632 ₁₃₂	46.78 ₂₁₇	41.564 ₈₈	33.57 ₁₉₉
29.5	25.03 ₁₁	43.64 ₂₈₈	54.764 ₉₀	48.95 ₂₀₆	41.652 ₅₄	35.56 ₂₁₀
May 9.5	25.14 ₃	46.52 ₂₇₃	54.854 ₄₆	51.01 ₁₉₁	41.706 ₂₀	37.66 ₂₁₂
19.5	25.17 ₃	49.25 ₂₅₅	54.900 ₅	52.92 ₁₇₃	41.726 ₁₁	39.78 ₂₀₇
29.4	25.14 ₁₁	51.80 ₂₃₁	54.905 ₃₈	54.65 ₁₅₂	41.715 ₄₂	41.85 ₁₉₅
June 8.4	25.03 ₁₈	54.11 ₂₀₁	54.867 ₇₉	56.17 ₁₂₇	41.673 ₇₁	43.80 ₁₇₇
18.4	24.85 ₂₄	56.12 ₁₆₆	54.788 ₁₁₈	57.44 ₁₀₀	41.602 ₉₇	45.57 ₁₅₅
28.3	24.61 ₂₉	57.78 ₁₂₇	54.670 ₁₅₃	58.44 ₇₀	41.505 ₁₂₀	47.12 ₁₂₈
July 8.3	24.32 ₃₄	59.05 ₈₅	54.517 ₁₈₄	59.14 ₃₈	41.385 ₁₄₂	48.40 ₉₈
18.3	23.98 ₃₈	59.90 ₄₀	54.333 ₂₁₀	59.52 ₄	41.243 ₁₅₈	49.38 ₆₆
28.3	23.60 ₄₁	60.30 ₇	54.123 ₂₂₇	59.56 ₃₀	41.085 ₁₇₀	50.04 ₃₂
Aug. 7.2	23.19 ₄₁	60.23 ₅₄	53.896 ₂₃₇	59.26 ₆₃	40.915 ₁₇₆	50.36 ₂
17.2	22.78 ₄₁	59.69 ₉₉	53.659 ₂₃₅	58.63 ₉₅	40.739 ₁₇₆	50.34 ₃₉
27.2	22.37 ₃₉	58.70 ₁₄₂	53.424 ₂₂₂	57.68 ₁₂₄	40.563 ₁₇₀	49.95 ₇₄
Sept. 6.2	21.98 ₃₄	57.28 ₁₇₉	53.202 ₁₉₈	56.44 ₁₄₇	40.393 ₁₅₄	49.21 ₁₁₀
16.1	21.64 ₂₈	55.49 ₂₁₀	53.004 ₁₆₂	54.97 ₁₆₇	40.239 ₁₃₁	48.11 ₁₄₄
26.1	21.36 ₂₁	53.39 ₂₃₅	52.842 ₁₁₅	53.30 ₁₇₈	40.108 ₉₉	46.67 ₁₇₈
Oct. 6.1	21.15 ₁₂	51.04 ₂₄₈	52.727 ₅₇	51.52 ₁₈₃	40.009 ₆₁	44.89 ₂₀₉
16.0	21.03 ₁	48.56 ₂₅₂	52.670 ₆	49.69 ₁₇₈	39.948 ₁₆	42.80 ₂₃₇
26.0	21.02 ₉	46.04 ₂₄₇	52.676 ₇₇	47.91 ₁₆₆	39.932 ₃₄	40.43 ₂₆₂
Nov. 5.0	21.11 ₂₀	43.57 ₂₂₉	52.753 ₁₄₇	46.25 ₁₄₅	39.966 ₈₇	37.81 ₂₈₂
15.0	21.31 ₃₀	41.28 ₂₀₂	52.900 ₂₁₇	44.80 ₁₁₇	40.053 ₁₄₀	34.99 ₂₉₅
24.9	21.61 ₄₀	39.26 ₁₆₇	53.117 ₂₈₀	43.63 ₈₃	40.193 ₁₉₁	32.04 ₃₀₀
Dec. 4.9	22.01 ₄₉	37.59 ₁₂₆	53.397 ₃₃₅	42.80 ₄₅	40.384 ₂₃₇	29.04 ₂₉₈
14.9	22.50 ₅₅	36.33 ₇₇	53.732 ₃₈₀	42.35 ₅	40.621 ₂₇₆	26.06 ₂₈₇
24.9	23.05 ₆₀	35.56 ₂₈	54.112 ₄₁₁	42.30 ₃₅	40.897 ₃₀₇	23.19 ₂₆₇
34.8	23.65	35.28	54.523	42.65	41.204	20.52
Mean Place	20.57	43.04	51.941	47.04	40.076	37.75
Sec δ , Tan δ	2.335	-2.110	1.468	-1.075	1.126	+0.518
L α , L δ	+0.03	-0.3	+0.02	-0.3	-0.01	-0.3
ω α , ω δ	-0.11	-0.6	-0.06	-0.6	+0.03	-0.6
AUTHORITY	A. N.		A. N.			

APPARENT PLACES OF STARS, 1924. 371

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	α Libræ. Mag. 2.9		β Ursæ Minoris. Mag. 2.2		ξ^2 Libræ. Mag. 5.6	
	R. A.	Dec. S.	R. A.	Dec. N.	R. A.	Dec. S.
	^h 14 ^m 46	[°] 15 ['] 43	^h 14 ^m 50	[°] 74 ['] 27	^h 14 ^m 52	[°] 11 ['] 6
Jan. 0.8	39.104 ³¹⁴	25.27 ¹⁵³	50.29 ⁷⁶	49.18 ²⁴⁰	37.287 ³⁰⁷	3.89 ¹⁶⁴
10.8	39.418 ³²⁶	26.80 ¹⁶¹	51.05 ⁸⁴	46.78 ¹⁸²	37.594 ³¹⁸	5.53 ¹⁶⁸
20.8	39.744 ³²⁵	28.41 ¹⁶³	51.89 ⁸⁸	44.96 ¹¹⁹	37.912 ³²⁰	7.21 ¹⁶⁶
30.8	40.069 ³¹⁸	30.04 ¹⁶¹	52.77 ⁸⁹	43.77 ⁵¹	38.232 ³¹³	8.87 ¹⁵⁷
Feb. 9.7	40.387 ³⁰²	31.65 ¹⁵²	53.66 ⁸⁸	43.26 ¹⁸	38.545 ²⁹⁸	10.44 ¹⁴⁴
19.7	40.689 ²⁸⁰	33.17 ¹³⁹	54.54 ⁸³	43.44 ⁸³	38.843 ²⁷⁹	11.88 ¹²⁶
29.7	40.969 ²⁵⁶	34.56 ¹²⁴	55.37 ⁷⁵	44.27 ¹⁴⁶	39.122 ²⁵⁴	13.14 ¹⁰⁷
Mar. 10.6	41.225 ²²⁸	35.80 ¹⁰⁷	56.12 ⁶⁶	45.73 ²⁰¹	39.376 ²²⁹	14.21 ⁸⁶
20.6	41.453 ¹⁹⁹	36.87 ⁸⁹	56.78 ⁵⁴	47.74 ²⁴⁶	39.605 ²⁰⁰	15.07 ⁶⁴
30.6	41.652 ¹⁷⁰	37.76 ⁷¹	57.32 ⁴⁰	50.20 ²⁸²	39.805 ¹⁷²	15.71 ⁴⁴
Apr. 9.6	41.822 ¹⁴¹	38.47 ⁵⁴	57.72 ²⁷	53.02 ³⁰⁶	39.977 ¹⁴³	16.15 ²⁶
19.5	41.963 ¹¹⁰	39.01 ³⁹	57.99 ¹³	56.08 ³¹⁸	40.120 ¹¹⁴	16.41 ¹⁰
29.5	42.073 ⁸²	39.40 ²⁵	58.12 ²	59.26 ³¹⁸	40.234 ⁸⁶	16.51 ⁴
May 9.5	42.155 ⁵²	39.65 ¹³	58.10 ¹⁵	62.44 ³⁰⁸	40.320 ⁵⁶	16.47 ¹⁶
19.5	42.207 ²⁴	39.78 ²	57.95 ²⁷	65.52 ²⁸⁸	40.376 ²⁹	16.31 ²⁵
29.4	42.231 ⁵	39.80 ⁸	57.68 ⁴⁰	68.40 ²⁵⁸	40.405 ⁰	16.06 ³¹
June 8.4	42.226 ³³	39.72 ¹⁶	57.28 ⁵⁰	70.98 ²²²	40.405 ²⁸	15.75 ³⁸
18.4	42.193 ⁶⁰	39.56 ²³	56.78 ⁵⁸	73.20 ¹⁷⁹	40.377 ⁵⁵	15.37 ⁴¹
28.3	42.133 ⁸⁵	39.33 ³⁰	56.20 ⁶⁶	74.99 ¹³¹	40.322 ⁸¹	14.96 ⁴⁴
July 8.3	42.048 ¹⁰⁸	39.03 ³⁷	55.54 ⁷¹	76.30 ⁸¹	40.241 ¹⁰³	14.52 ⁴⁷
18.3	41.940 ¹²⁸	38.66 ⁴³	54.83 ⁷⁵	77.11 ²⁹	40.138 ¹²⁴	14.05 ⁴⁷
28.3	41.812 ¹⁴³	38.23 ⁴⁷	54.08 ⁷⁸	77.40 ²⁵	40.014 ¹³⁹	13.58 ⁴⁸
Aug. 7.2	41.669 ¹⁵¹	37.76 ⁵¹	53.30 ⁷⁷	77.15 ⁷⁸	39.875 ¹⁴⁹	13.10 ⁴⁶
17.2	41.518 ¹⁵⁴	37.25 ⁵²	52.53 ⁷⁶	76.37 ¹³⁰	39.726 ¹⁵²	12.64 ⁴⁵
27.2	41.364 ¹⁴⁹	36.73 ⁵³	51.77 ⁷²	75.07 ¹⁷⁹	39.574 ¹⁴⁸	12.19 ⁴⁰
Sept. 6.2	41.215 ¹³⁵	36.20 ⁵⁰	51.05 ⁶⁷	73.28 ²²⁶	39.426 ¹³⁶	11.79 ³²
16.1	41.080 ¹¹²	35.70 ⁴⁴	50.38 ⁶⁰	71.02 ²⁶⁷	39.290 ¹¹⁴	11.47 ²⁴
26.1	40.968 ⁸¹	35.26 ³⁴	49.78 ⁵⁰	68.35 ³⁰⁵	39.176 ⁸⁵	11.23 ¹¹
Oct. 6.1	40.887 ⁴³	34.92 ²¹	49.28 ⁴⁰	65.30 ³³⁶	39.091 ⁴⁸	11.12 ⁵
16.0	40.844 ²	34.71 ³	48.88 ²⁸	61.94 ³⁶²	39.043 ³	11.17 ²²
26.0	40.846 ⁵²	34.68 ¹⁶	48.60 ¹³	58.32 ³⁷⁸	39.040 ⁴⁴	11.39 ⁴⁴
Nov. 5.0	40.898 ¹⁰⁴	34.84 ⁴⁰	48.47 ¹	54.54 ³⁸⁶	39.084 ⁹⁵	11.83 ⁶⁷
15.0	41.002 ¹⁵⁵	35.24 ⁶³	48.48 ¹⁶	50.68 ³⁸⁶	39.179 ¹⁴⁵	12.50 ⁹⁰
24.9	41.157 ²⁰³	35.87 ⁸⁸	48.64 ³¹	46.82 ³⁷³	39.324 ¹⁹⁴	13.40 ¹¹²
Dec. 4.9	41.360 ²⁴⁵	36.75 ¹¹²	48.95 ⁴⁶	43.09 ³⁵¹	39.518 ²³⁶	14.52 ¹³³
14.9	41.605 ²⁸⁰	37.87 ¹³¹	49.41 ⁵⁹	39.58 ³¹⁸	39.754 ²⁷¹	15.85 ¹⁵⁰
24.9	41.885 ³⁰⁷	39.18 ¹⁴⁸	50.00 ⁷¹	36.40 ²⁷⁴	40.025 ²⁹⁸	17.35 ¹⁶²
34.8	42.192	40.66	50.71	33.66	40.323	18.97
Mean Place	40.210	36.64	54.67	57.76	38.439	13.96
Sec δ , Tan δ	1.039	-0.282	3.734	+3.598	1.019	-0.196
L α , L δ	0.00	-0.3	-0.06	-0.3	0.00	-0.3
ω α , ω δ	-0.01	-0.7	+0.18	-0.7	-0.01	-0.7
AUTHORITY	A. E.		A. E.			

372 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	β Lupi. Mag. 2.8		κ Centauri. Mag. 3.4		β Boötis. Mag. 3.6	
	R. A.	Dec. S.	R. A.	Dec. S.	R. A.	Dec. N.
	^h 14 ^m 53	[°] 42 ['] 49	^h 14 ^m 54	[°] 41 ['] 47	^h 14 ^m 59	[°] 40 ['] 41
Jan. 0.8	31.384 ₃₉₂	25.93 ₅₅	11.358 ₃₈₇	42.73 ₅₈	3.268 ₃₃₇	18.97 ₂₆₇
10.8	31.776 ₄₀₇	26.48 ₈₈	11.745 ₄₀₀	43.31 ₉₁	3.605 ₃₆₀	16.30 ₂₂₅
20.8	32.183 ₄₀₈	27.36 ₁₁₈	12.145 ₄₀₂	44.22 ₁₁₉	3.965 ₃₇₀	14.05 ₁₇₃
30.8	32.591 ₄₀₀	28.54 ₁₄₅	12.547 ₃₉₅	45.41 ₁₄₄	4.335 ₃₆₉	12.32 ₁₁₈
Feb. 9.7	32.991 ₃₈₄	29.99 ₁₆₅	12.942 ₃₇₈	46.85 ₁₆₄	4.704 ₃₅₈	11.14 ₅₈
19.7	33.375 ₃₅₉	31.64 ₁₈₁	13.320 ₃₅₄	48.49 ₁₇₉	5.062 ₃₃₈	10.56 ₂
29.7	33.734 ₃₃₀	33.45 ₁₉₂	13.674 ₃₂₆	50.28 ₁₈₉	5.400 ₃₀₉	10.58 ₆₁
Mar. 10.7	34.064 ₂₉₈	35.37 ₁₉₉	14.000 ₂₉₃	52.17 ₁₉₅	5.709 ₂₇₄	11.19 ₁₁₄
20.6	34.362 ₂₆₂	37.36 ₂₀₁	14.293 ₂₅₉	54.12 ₁₉₇	5.983 ₂₃₅	12.33 ₁₆₂
30.6	34.624 ₂₂₄	39.37 ₂₀₂	14.552 ₂₂₂	56.09 ₁₉₆	6.218 ₁₉₄	13.95 ₂₀₁
Apr. 9.6	34.848 ₁₈₇	41.39 ₁₉₇	14.774 ₁₈₆	58.05 ₁₉₂	6.412 ₁₅₁	15.96 ₂₃₂
19.5	35.035 ₁₄₉	43.36 ₁₉₀	14.960 ₁₄₈	59.97 ₁₈₄	6.563 ₁₀₇	18.28 ₂₅₂
29.5	35.184 ₁₀₉	45.26 ₁₈₀	15.108 ₁₁₀	61.81 ₁₇₅	6.670 ₆₅	20.80 ₂₆₃
May 9.5	35.293 ₆₉	47.06 ₁₆₉	15.218 ₇₀	63.56 ₁₆₂	6.735 ₂₂	23.43 ₂₆₅
19.5	35.362 ₃₀	48.75 ₁₅₄	15.288 ₃₁	65.18 ₁₄₈	6.757 ₁₈	26.08 ₂₅₆
29.4	35.392 ₁₁	50.29 ₁₃₅	15.319 ₉	66.66 ₁₃₁	6.739 ₅₇	28.64 ₂₄₁
June 8.4	35.381 ₅₁	51.64 ₁₁₅	15.310 ₄₇	67.97 ₁₁₀	6.682 ₉₃	31.05 ₂₁₈
18.4	35.330 ₈₉	52.79 ₉₂	15.263 ₈₆	69.07 ₈₈	6.589 ₁₂₆	33.23 ₁₈₉
28.4	35.241 ₁₂₅	53.71 ₆₇	15.177 ₁₂₀	69.95 ₆₄	6.463 ₁₅₆	35.12 ₁₅₅
July 8.3	35.116 ₁₅₆	54.38 ₃₉	15.057 ₁₅₃	70.59 ₃₆	6.307 ₁₈₁	36.67 ₁₁₇
18.3	34.960 ₁₈₄	54.77 ₁₀	14.904 ₁₈₀	70.95 ₉	6.126 ₂₀₂	37.84 ₇₇
28.3	34.776 ₂₀₅	54.87 ₂₀	14.724 ₁₉₉	71.04 ₂₀	5.924 ₂₁₈	38.61 ₃₃
Aug. 7.2	34.571 ₂₁₆	54.67 ₄₉	14.525 ₂₁₃	70.84 ₄₉	5.706 ₂₂₆	38.94 ₁₀
17.2	34.355 ₂₂₀	54.18 ₇₇	14.312 ₂₁₆	70.35 ₇₆	5.480 ₂₂₈	38.84 ₅₄
27.2	34.135 ₂₁₂	53.41 ₁₀₃	14.096 ₂₀₈	69.59 ₁₀₁	5.252 ₂₂₁	38.30 ₉₈
Sept. 6.2	33.923 ₁₉₃	52.38 ₁₂₅	13.888 ₁₉₀	68.58 ₁₂₂	5.031 ₂₀₆	37.32 ₁₄₁
16.1	33.730 ₁₆₃	51.13 ₁₄₂	13.698 ₁₆₀	67.36 ₁₃₉	4.825 ₁₈₃	35.91 ₁₈₁
26.1	33.567 ₁₂₂	49.71 ₁₅₄	13.538 ₁₂₀	65.97 ₁₄₉	4.642 ₁₄₉	34.10 ₂₂₀
Oct. 6.1	33.445 ₇₂	48.17 ₁₅₇	13.418 ₇₀	64.48 ₁₅₄	4.493 ₁₀₆	31.90 ₂₅₆
16.1	33.373 ₁₂	46.60 ₁₅₅	13.348 ₁₂	62.94 ₁₄₉	4.387 ₅₈	29.34 ₂₈₆
26.0	33.361 ₅₃	45.05 ₁₄₄	13.336 ₅₁	61.45 ₁₃₉	4.329 ₃	26.48 ₃₁₁
Nov. 5.0	33.414 ₁₁₉	43.61 ₁₂₆	13.387 ₁₁₈	60.06 ₁₂₀	4.326 ₅₇	23.37 ₃₃₁
15.0	33.533 ₁₈₅	42.35 ₁₀₂	13.505 ₁₈₂	58.86 ₉₆	4.383 ₁₁₇	20.06 ₃₄₂
24.9	33.718 ₂₄₆	41.33 ₇₁	13.687 ₂₄₃	57.90 ₆₆	4.500 ₁₇₇	16.64 ₃₄₄
Dec. 4.9	33.964 ₃₀₁	40.62 ₃₇	13.930 ₂₉₇	57.24 ₃₂	4.677 ₂₃₁	13.20 ₃₃₇
14.9	34.265 ₃₄₅	40.25 ₂	14.227 ₃₄₀	56.92 ₃	4.908 ₂₈₁	9.83 ₃₂₀
24.9	34.610 ₃₇₉	40.23 ₃₆	14.567 ₃₇₄	56.95 ₃₉	5.189 ₃₂₀	6.63 ₂₉₂
34.8	34.989	40.59	14.941	57.34	5.509	3.71
Mean Place	32.586	44.55	12.555	61.09	5.002	22.50
Sec δ , Tan δ	1.363	-0.927	1.341	-0.894	1.319	+0.860
L α , L δ	+0.02	-0.3	+0.02	-0.3	-0.02	-0.3
ω α , ω δ	-0.04	-0.7	-0.04	-0.7	+0.04	-0.7
AUTHORITY	A. E.		A. N.		A. E.	

APPARENT PLACES OF STARS, 1924. 373

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	γ Scorpii. Mag. 3.4		ψ Boötis. Mag. 4.7		ζ Lupi. Mag. 3.5	
	R. A.	Dec. S.	R. A.	Dec. N.	R. A.	Dec. S.
	^h 14 ^m 59 ^s	[°] 24 58	^h 15 ^m 1 ^s	[°] 27 14	^h 15 ^m 6 ^s	[°] 51 48
Jan. 0.9	35.874 ₃₂₇	48.97 ₁₁₄	9.839 ₃₀₆	34.96 ₂₅₅	47.446 ₄₄₃	19.17 ₇
10.8	36.201 ₃₄₀	50.11 ₁₃₁	10.145 ₃₂₄	32.41 ₂₂₂	47.889 ₄₆₃	19.24 ₄₇
20.8	36.541 ₃₄₂	51.42 ₁₄₄	10.469 ₃₃₁	30.19 ₁₈₁	48.352 ₄₇₁	19.71 ₈₄
30.8	36.883 ₃₃₆	52.86 ₁₅₁	10.800 ₃₂₉	28.38 ₁₃₆	48.823 ₄₆₆	20.55 ₁₁₉
Feb. 9.7	37.219 ₃₂₂	54.37 ₁₅₂	11.129 ₃₁₇	27.02 ₈₅	49.289 ₄₅₁	21.74 ₁₄₈
19.7	37.541 ₃₀₃	55.89 ₁₅₁	11.446 ₂₉₉	26.17 ₃₂	49.740 ₄₂₇	23.22 ₁₇₄
29.7	37.844 ₂₇₈	57.40 ₁₄₅	11.745 ₂₇₄	25.85 ₁₈	50.167 ₃₉₇	24.96 ₁₉₄
Mar. 10.7	38.122 ₂₅₂	58.85 ₁₃₆	12.019 ₂₄₅	26.03 ₆₇	50.564 ₃₆₀	26.90 ₂₀₉
20.6	38.374 ₂₂₃	60.21 ₁₂₆	12.264 ₂₁₃	26.70 ₁₁₀	50.924 ₃₂₂	28.99 ₂₂₁
30.6	38.597 ₁₉₃	61.47 ₁₁₄	12.477 ₁₇₉	27.80 ₁₄₈	51.246 ₂₈₀	31.20 ₂₂₈
Apr. 9.6	38.790 ₁₆₃	62.61 ₁₀₂	12.656 ₁₄₄	29.28 ₁₇₇	51.526 ₂₃₆	33.48 ₂₃₀
19.6	38.953 ₁₃₂	63.63 ₈₉	12.800 ₁₀₉	31.05 ₁₉₉	51.762 ₁₉₀	35.78 ₂₂₉
29.5	39.085 ₁₀₀	64.52 ₇₈	12.909 ₇₄	33.04 ₂₁₂	51.952 ₁₄₂	38.07 ₂₂₃
May 9.5	39.185 ₇₀	65.30 ₆₆	12.983 ₄₀	35.16 ₂₁₇	52.094 ₉₄	40.30 ₂₁₄
19.5	39.255 ₃₈	65.96 ₅₄	13.023 ₆	37.33 ₂₁₄	52.188 ₄₃	42.44 ₂₀₂
29.4	39.293 ₇	66.50 ₄₂	13.029 ₂₆	39.47 ₂₀₅	52.231 ₆	44.46 ₁₈₃
June 8.4	39.300 ₂₆	66.92 ₃₀	13.003 ₅₇	41.52 ₁₈₈	52.225 ₅₆	46.29 ₁₆₂
18.4	39.274 ₅₆	67.22 ₁₇	12.946 ₈₆	43.40 ₁₆₇	52.169 ₁₀₄	47.91 ₁₃₈
28.4	39.218 ₈₅	67.39 ₅	12.860 ₁₁₂	45.07 ₁₄₂	52.065 ₁₄₉	49.29 ₁₀₈
July 8.3	39.133 ₁₁₃	67.44 ₉	12.748 ₁₃₆	46.49 ₁₁₂	51.916 ₁₉₀	50.37 ₇₇
18.3	39.020 ₁₃₅	67.35 ₂₃	12.612 ₁₅₆	47.61 ₈₀	51.726 ₂₂₅	51.14 ₄₃
28.3	38.885 ₁₅₃	67.12 ₃₅	12.456 ₁₇₂	48.41 ₄₇	51.501 ₂₅₂	51.57 ₆
Aug. 7.3	38.732 ₁₆₅	66.77 ₄₉	12.284 ₁₈₁	48.88 ₁₁	51.249 ₂₆₉	51.63 ₃₀
17.2	38.567 ₁₇₀	66.28 ₅₉	12.103 ₁₈₄	48.99 ₂₅	50.980 ₂₇₄	51.33 ₆₇
27.2	38.397 ₁₆₅	65.69 ₆₈	11.919 ₁₈₀	48.74 ₆₂	50.706 ₂₆₉	50.66 ₁₀₀
Sept. 6.2	38.232 ₁₅₃	65.01 ₇₅	11.739 ₁₆₈	48.12 ₉₇	50.437 ₂₄₇	49.66 ₁₃₁
16.1	38.079 ₁₃₀	64.26 ₇₇	11.571 ₁₄₇	47.15 ₁₃₃	50.190 ₂₁₃	48.35 ₁₅₈
26.1	37.949 ₉₉	63.49 ₇₆	11.424 ₁₁₈	45.82 ₁₆₈	49.977 ₁₆₈	46.77 ₁₇₇
Oct. 6.1	37.850 ₅₈	62.73 ₆₉	11.306 ₈₂	44.14 ₂₀₀	49.809 ₁₀₉	45.00 ₁₉₁
16.1	37.792 ₁₀	62.04 ₅₈	11.224 ₃₇	42.14 ₂₃₀	49.700 ₄₂	43.09 ₁₉₄
26.0	37.782 ₄₁	61.46 ₄₁	11.187 ₁₁	39.84 ₂₅₆	49.658 ₃₄	41.15 ₁₉₀
Nov. 5.0	37.823 ₉₇	61.05 ₂₁	11.198 ₆₄	37.28 ₂₇₇	49.692 ₁₁₁	39.25 ₁₇₈
15.0	37.920 ₁₅₁	60.84 ₂	11.262 ₁₁₈	34.51 ₂₉₃	49.803 ₁₈₉	37.47 ₁₅₆
25.0	38.071 ₂₀₃	60.86 ₂₉	11.380 ₁₆₉	31.58 ₃₀₁	49.992 ₂₆₂	35.91 ₁₂₈
Dec. 4.9	38.274 ₂₄₉	61.15 ₅₅	11.549 ₂₁₈	28.57 ₃₀₁	50.254 ₃₂₇	34.63 ₉₄
14.9	38.523 ₂₈₇	61.70 ₈₁	11.767 ₂₅₉	25.56 ₂₉₃	50.581 ₃₈₃	33.69 ₅₆
24.9	38.810 ₃₁₆	62.51 ₁₀₄	12.026 ₂₉₃	22.63 ₂₇₃	50.964 ₄₂₅	33.13 ₁₆
34.8	39.126	63.55	12.319	19.90	51.389	32.97
Mean Place	37.054	63.00	11.327	35.37	48.882	39.43
Sec δ , Tan δ	1.103	-0.466	1.125	+0.515	1.617	-1.271
L α , L δ	+0.01	-0.3	-0.01	-0.3	+0.02	-0.3
ω α , ω δ	-0.02	-0.7	+0.02	-0.7	-0.06	-0.7
AUTHORITY	A. E.		A. E.		A. E.	

374 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	ι Libræ. Mag. 4·7		γ Triang. Aust. Mag. 3·1		δ Boëtis. Mag. 3·5		
	R. A.	Dec. S.	R. A.	Dec. S.	R. A.	Dec. N.	
	^h 15	^m 7	^h 15	^m 11	^h 15	^m 12	
	^s 15	[°] 19	^s 11	[°] 68	^s 12	[°] 33	
Jan.	0·9	51·875 ³¹³	6·10 ¹²⁸	45·18 ⁶⁸	38·84 ⁵⁹	24·704 ³¹⁰	49·60 ²⁶⁹
	10·8	52·188 ³²⁵	7·38 ¹⁴¹	45·86 ⁷²	38·25 ¹⁰	25·014 ³³²	46·91 ²³³
	20·8	52·513 ³³⁰	8·79 ¹⁴⁶	46·58 ⁷⁴	38·15 ⁴⁰	25·346 ³⁴³	44·58 ¹⁸⁷
	30·8	52·843 ³²⁵	10·25 ¹⁴⁸	47·32 ⁷⁴	38·55 ⁸⁶	25·689 ³⁴⁴	42·71 ¹³⁷
Feb.	9·7	53·168 ³¹⁴	11·73 ¹⁴⁵	48·06 ⁷²	39·41 ¹³⁰	26·033 ³³⁶	41·34 ⁸²
	19·7	53·482 ²⁹⁵	13·18 ¹³⁶	48·78 ⁶⁸	40·71 ¹⁷⁰	26·369 ³¹⁸	40·52 ²⁵
	29·7	53·777 ²⁷³	14·54 ¹²⁵	49·46 ⁶⁴	42·41 ²⁰³	26·687 ²⁹⁵	40·27 ³⁰
Mar.	10·7	54·050 ²⁴⁹	15·79 ¹¹²	50·10 ⁵⁹	44·44 ²³³	26·982 ²⁶⁵	40·57 ⁸²
	20·6	54·299 ²²¹	16·91 ⁹⁸	50·69 ⁵³	46·77 ²⁵⁷	27·247 ²³³	41·39 ¹³⁰
	30·6	54·520 ¹⁹³	17·89 ⁸³	51·22 ⁴⁵	49·34 ²⁷⁴	27·480 ¹⁹⁶	42·69 ¹⁷⁰
Apr.	9·6	54·713 ¹⁶⁵	18·72 ⁶⁹	51·67 ³⁸	52·08 ²⁸⁵	27·676 ¹⁶⁰	44·39 ²⁰²
	19·6	54·878 ¹³⁶	19·41 ⁵⁵	52·05 ³⁰	54·93 ²⁹³	27·836 ¹²²	46·41 ²²⁵
	29·5	55·014 ¹⁰⁶	19·96 ⁴³	52·35 ²¹	57·86 ²⁹³	27·958 ⁸³	48·66 ²⁴⁰
May	9·5	55·120 ⁷⁶	20·39 ³²	52·56 ¹³	60·79 ²⁸⁸	28·041 ⁴⁶	51·06 ²⁴⁴
	19·5	55·196 ⁴⁵	20·71 ²¹	52·69 ⁴	63·67 ²⁷⁶	28·087 ⁹	53·50 ²⁴¹
	29·4	55·241 ¹⁵	20·92 ¹³	52·73 ⁵	66·43 ²⁵⁹	28·096 ²⁶	55·91 ²³⁰
June	8·4	55·256 ¹⁶	21·05 ⁴	52·68 ¹⁴	69·02 ²³⁵	28·070 ⁶²	58·21 ²¹²
	18·4	55·240 ⁴⁶	21·09 ⁵	52·54 ²²	71·37 ²⁰⁶	28·008 ⁹³	60·33 ¹⁸⁷
	28·4	55·194 ⁷⁶	21·04 ¹⁴	52·32 ³⁰	73·43 ¹⁷¹	27·915 ¹²³	62·20 ¹⁵⁹
July	8·3	55·118 ¹⁰³	20·90 ²¹	52·02 ³⁷	75·14 ¹³¹	27·792 ¹⁵⁰	63·79 ¹²⁶
	18·3	55·015 ¹²⁵	20·69 ²⁹	51·65 ⁴²	76·45 ⁸⁸	27·642 ¹⁷²	65·05 ⁹⁰
	28·3	54·890 ¹⁴⁵	20·40 ³⁷	51·23 ⁴⁷	77·33 ⁴²	27·470 ¹⁸⁹	65·95 ⁵¹
Aug.	7·3	54·745 ¹⁵⁷	20·03 ⁴⁵	50·76 ⁴⁹	77·75 ⁶	27·281 ²⁰¹	66·46 ¹²
	17·2	54·588 ¹⁶⁴	19·58 ⁴⁹	50·27 ⁵⁰	77·69 ⁵⁵	27·080 ²⁰⁶	66·58 ²⁸
	27·2	54·424 ¹⁶²	19·09 ⁵⁴	49·77 ⁴⁹	77·14 ¹⁰³	26·874 ²⁰³	66·30 ⁶⁹
Sept.	6·2	54·262 ¹⁵⁰	18·55 ⁵⁶	49·28 ⁴⁵	76·11 ¹⁴⁶	26·671 ¹⁹¹	65·61 ¹⁰⁹
	16·1	54·112 ¹³¹	17·99 ⁵³	48·83 ⁴⁰	74·65 ¹⁸⁵	26·480 ¹⁷¹	64·52 ¹⁴⁹
	26·1	53·981 ¹⁰¹	17·46 ⁴⁹	48·43 ³²	72·80 ²¹⁷	26·309 ¹⁴²	63·03 ¹⁸⁶
Oct.	6·1	53·880 ⁶³	16·97 ⁴⁰	48·11 ²²	70·63 ²⁴²	26·167 ¹⁰⁴	61·17 ²²¹
	16·1	53·817 ¹⁸	16·57 ²⁶	47·89 ¹²	68·21 ²⁵⁶	26·063 ⁶⁰	58·96 ²⁵³
	26·0	53·799 ³¹	16·31 ⁹	47·77 ¹	65·65 ²⁶⁰	26·003 ⁹	56·43 ²⁸⁰
Nov.	5·0	53·830 ⁸⁵	16·22 ¹¹	47·78 ¹³	63·05 ²⁵⁴	25·994 ⁴⁶	53·63 ³⁰²
	15·0	53·915 ¹³⁸	16·33 ³⁴	47·91 ²⁶	60·51 ²³⁶	26·040 ¹⁰³	50·61 ³¹⁷
	25·0	54·053 ¹⁸⁹	16·67 ⁵⁸	48·17 ³⁸	58·15 ²¹⁰	26·143 ¹⁵⁸	47·44 ³²⁵
Dec.	4·9	54·242 ²³³	17·25 ⁸²	48·55 ⁴⁸	56·05 ¹⁷⁵	26·301 ²¹⁰	44·19 ³²²
	14·9	54·475 ²⁷²	18·07 ¹⁰³	49·03 ⁵⁸	54·30 ¹³³	26·511 ²⁵⁶	40·97 ³¹¹
	24·9	54·747 ³⁰¹	19·10 ¹²²	49·61 ⁶⁴	52·97 ⁸⁶	26·767 ²⁹³	37·86 ²⁹⁰
	34·8	55·048	20·32	50·25	52·11	27·060	34·96
Mean Place	53·099	18·62	47·28	61·60	26·341	50·96	
Sec δ, Tan δ	1·061	—0·354	2·716	—2·526	1·201	+0·664	
L α, L δ	+0·01	—0·3	+0·05	—0·3	—0·01	—0·3	
ω α, ω δ	—0·02	—0·7	—0·11	—0·7	+0·03	—0·7	
AUTHORITY	A. N.		A. E.		A. E.		

APPARENT PLACES OF STARS, 1924. 375

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	β Libræ. Mag. 2.7		α^2 Libræ. Mag. 6.7		γ^2 Ursæ Minoris. Mag. 3.1	
	R. A.	Dec. S.	R. A.	Dec. S.	R. A.	Dec. N.
	^h 15 ^m 12	[°] 9 ['] 6	^h 15 ^m 18	[°] 14 ['] 51	^h 15 ^m 20	[°] 72 ['] 5
Jan. 0.9	53.606 ²⁹⁶	2.77 ¹⁶³	45.952 ³⁰⁰	38.70 ¹⁴⁰	46.18 ⁶²	69.43 ²⁷⁵
10.8	53.902 ³¹⁰	4.40 ¹⁶⁵	46.252 ³¹⁵	40.10 ¹⁴⁶	46.80 ⁶⁹	66.68 ²²¹
20.8	54.212 ³¹⁶	6.05 ¹⁶⁰	46.567 ³²²	41.56 ¹⁴⁹	47.49 ⁷⁵	64.47 ¹⁶¹
30.8	54.528 ³¹²	7.65 ¹⁵¹	46.889 ³¹⁸	43.05 ¹⁴⁵	48.24 ⁷⁸	62.86 ⁹⁶
Feb. 9.7	54.840 ³⁰¹	9.16 ¹³⁵	47.207 ³⁰⁹	44.50 ¹³⁶	49.02 ⁷⁸	61.90 ²⁷
19.7	55.141 ²⁸⁵	10.51 ¹¹⁶	47.516 ²⁹³	45.86 ¹²⁴	49.80 ⁷⁶	61.63 ⁴¹
29.7	55.426 ²⁶⁴	11.67 ⁹⁵	47.809 ²⁷³	47.10 ¹⁰⁷	50.56 ⁷⁰	62.04 ¹⁰⁶
Mar. 10.7	55.690 ²⁴¹	12.62 ⁷²	48.082 ²⁵⁰	48.17 ⁹²	51.26 ⁶³	63.10 ¹⁶⁶
20.6	55.931 ²¹⁵	13.34 ⁵⁰	48.332 ²²⁵	49.09 ⁷²	51.89 ⁵⁵	64.76 ²¹⁷
30.6	56.146 ¹⁸⁸	13.84 ²⁹	48.557 ¹⁹⁸	49.81 ⁵⁶	52.44 ⁴⁴	66.93 ²⁶⁰
Apr. 9.6	56.334 ¹⁶¹	14.13 ¹⁰	48.755 ¹⁷⁰	50.37 ³⁹	52.88 ³²	69.53 ²⁹²
19.6	56.495 ¹³²	14.23 ⁷	48.925 ¹⁴³	50.76 ²⁵	53.20 ²¹	72.45 ³¹²
29.5	56.627 ¹⁰⁴	14.16 ²⁰	49.068 ¹¹⁴	51.01 ¹²	53.41 ⁸	75.57 ³²¹
May 9.5	56.731 ⁷⁶	13.96 ³¹	49.182 ⁸⁴	51.13 ²	53.49 ³	78.78 ³¹⁸
19.5	56.807 ⁴⁶	13.65 ³⁹	49.266 ⁵⁵	51.15 ⁶	53.46 ¹⁵	81.96 ³⁰⁵
29.4	56.853 ¹⁶	13.26 ⁴⁵	49.321 ²⁴	51.09 ¹⁵	53.31 ²⁶	85.01 ²⁸³
June 8.4	56.869 ¹³	12.81 ⁴⁸	49.345 ⁷	50.94 ¹⁹	53.05 ³⁶	87.84 ²⁵³
18.4	56.856 ⁴²	12.33 ⁵⁰	49.338 ³⁸	50.75 ²⁵	52.69 ⁴⁵	90.37 ²¹⁵
28.4	56.814 ⁷⁰	11.83 ⁵⁰	49.300 ⁶⁷	50.50 ²⁹	52.24 ⁵²	92.52 ¹⁷²
July 8.3	56.744 ⁹⁵	11.33 ⁵⁰	49.233 ⁹⁴	50.21 ³²	51.72 ⁵⁹	94.24 ¹²⁵
18.3	56.649 ¹¹⁹	10.83 ⁴⁸	49.139 ¹¹⁹	49.89 ³⁷	51.13 ⁶⁴	95.49 ⁷⁴
28.3	56.530 ¹³⁶	10.35 ⁴⁶	49.020 ¹³⁹	49.52 ³⁸	50.49 ⁶⁷	96.23 ²²
Aug. 7.3	56.394 ¹⁵⁰	9.89 ⁴²	48.881 ¹⁵³	49.14 ⁴¹	49.82 ⁶⁹	96.45 ³⁰
17.2	56.244 ¹⁵⁶	9.47 ³⁷	48.728 ¹⁶¹	48.73 ⁴²	49.13 ⁶⁹	96.15 ⁸⁴
27.2	56.088 ¹⁵⁵	9.10 ³²	48.567 ¹⁶¹	48.31 ⁴²	48.44 ⁶⁷	95.31 ¹³⁵
Sept. 6.2	55.933 ¹⁴⁶	8.78 ²³	48.406 ¹⁵²	47.89 ³⁹	47.77 ⁶⁴	93.96 ¹⁸⁴
16.1	55.787 ¹²⁸	8.55 ¹³	48.254 ¹³⁴	47.50 ³⁴	47.13 ⁵⁸	91.12 ²³⁰
26.1	55.659 ¹⁰¹	8.42 ⁰	48.120 ¹⁰⁷	47.16 ²⁶	46.55 ⁵²	89.82 ²⁷¹
Oct. 6.1	55.558 ⁶⁵	8.42 ¹⁶	48.013 ⁷¹	46.90 ¹⁴	46.03 ⁴³	87.11 ³⁰⁹
16.1	55.493 ²⁴	8.58 ³³	47.942 ²⁸	46.76 ⁰	45.60 ³³	84.02 ³⁴⁰
26.0	55.469 ²³	8.91 ⁵⁴	47.914 ¹⁹	46.76 ¹⁸	45.27 ²⁰	80.62 ³⁶⁴
Nov. 5.0	55.492 ⁷⁴	9.45 ⁷⁵	47.933 ⁷¹	46.94 ³⁸	45.07 ⁸	76.98 ³⁸⁰
15.0	55.566 ¹²⁴	10.20 ⁹⁷	48.004 ¹²³	47.32 ⁶⁰	44.99 ⁵	73.18 ³⁸⁶
25.0	55.690 ¹⁷³	11.17 ¹¹⁷	48.127 ¹⁷⁴	47.92 ⁸¹	45.04 ¹⁹	69.32 ³⁸³
Dec. 4.9	55.863 ²¹⁷	12.34 ¹³⁷	48.301 ²¹⁹	48.73 ¹⁰³	45.23 ³²	65.49 ³⁶⁷
14.9	56.080 ²⁵⁵	13.71 ¹⁵²	48.520 ²⁵⁷	49.76 ¹²¹	45.55 ⁴⁴	61.82 ³⁴²
24.9	56.335 ²⁸⁴	15.23 ¹⁶²	48.777 ²⁸⁷	50.97 ¹³⁵	45.99 ⁵⁶	58.40 ³⁰⁵
34.8	56.619	16.85	49.064	52.32	46.55	55.35
Mean Place	54.871	12.45	47.239	49.97	50.28	75.78
Sec δ , Tan δ	1.013	-0.160	1.035	-0.265	3.254	+3.097
L α , L δ	0.00	-0.3	+0.01	-0.3	-0.06	-0.3
ω α , ω δ	-0.01	-0.7	-0.01	-0.8	+0.13	-0.8
AUTHORITY	A. E.				A. E.	

376 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	♌ Draconis. Mag. 3.5		♐ 32 Libræ. Mag. 5.9		♏ 113 G. Lupi. Mag. 3.0	
	R. A.	Dec. N.	R. A.	Dec. S.	R. A.	Dec. S.
	^h 15 23	[°] 59 13	^h 15 23	[°] 16 26	^h 15 30	[°] 40 54
Jan. 0.9	11.733 ⁸ ₄₁₁	49.28 ²⁸⁷	56.696 ²⁹⁹	57.72 ¹³²	2.661 ³⁶³	28.42 ²⁶
10.8	12.144 ⁴⁵⁷	46.41 ²³⁹	56.995 ³¹⁵	59.04 ¹³⁹	3.024 ³⁸⁵	28.68 ⁵⁶
20.8	12.601 ⁴⁸⁷	44.02 ¹⁸¹	57.310 ³²³	60.43 ¹⁴³	3.409 ³⁹⁴	29.24 ⁸²
30.8	13.088 ⁵⁰⁰	42.21 ¹¹⁷	57.633 ³²¹	61.86 ¹⁴¹	3.803 ³⁹⁵	30.06 ¹⁰⁶
Feb. 9.8	13.588 ⁴⁹⁷	41.04 ⁵¹	57.954 ³¹²	63.27 ¹³⁵	4.198 ³⁸⁶	31.12 ¹²⁶
19.7	14.085 ⁴⁸⁰	40.53 ¹⁷	58.266 ²⁹⁷	64.62 ¹²³	4.584 ³⁷¹	32.38 ¹⁴²
29.7	14.565 ⁴⁴⁹	40.70 ⁸⁰	58.563 ²⁷⁸	65.85 ¹¹⁰	4.955 ³⁴⁸	33.80 ¹⁵³
Mar. 10.7	15.014 ⁴⁰⁵	41.50 ¹⁴³	58.841 ²⁵⁵	66.95 ⁹⁴	5.303 ³²³	35.33 ¹⁶¹
20.6	15.419 ³⁵²	42.93 ¹⁹⁵	59.096 ²³⁰	67.89 ⁷⁸	5.626 ²⁹³	36.94 ¹⁶⁶
30.6	15.771 ²⁹²	44.88 ²⁴⁰	59.326 ²⁰⁵	68.67 ⁶¹	5.919 ²⁶²	38.60 ¹⁶⁸
Apr. 9.6	16.063 ²²⁸	47.28 ²⁷⁴	59.531 ¹⁷⁷	69.28 ⁴⁶	6.181 ²²⁸	40.28 ¹⁶⁷
19.6	16.291 ¹⁵⁹	50.02 ²⁹⁸	59.708 ¹⁴⁹	69.74 ³³	6.409 ¹⁹³	41.95 ¹⁶⁴
29.5	16.450 ⁹⁰	53.00 ³¹⁰	59.857 ¹²⁰	70.07 ²⁰	6.602 ¹⁵⁵	43.59 ¹⁶⁰
May 9.5	16.540 ²²	56.10 ³¹¹	59.977 ⁹¹	70.27 ¹¹	6.757 ¹¹⁷	45.19 ¹⁵²
19.5	16.562 ⁴⁵	59.21 ³⁰³	60.068 ⁶⁰	70.38 ²	6.874 ⁷⁶	46.71 ¹⁴³
29.5	16.517 ¹⁰⁸	62.24 ²⁸⁴	60.128 ³⁰	70.40 ⁶	6.950 ³⁵	48.14 ¹³¹
June 8.4	16.409 ¹⁶⁷	65.08 ²⁵⁷	60.158 ³	70.34 ¹²	6.985 ⁶	49.45 ¹¹⁶
18.4	16.242 ²²¹	67.65 ²²⁴	60.155 ³⁴	70.22 ¹⁷	6.979 ⁴⁹	50.61 ⁹⁹
28.4	16.021 ²⁶⁹	69.89 ¹⁸⁴	60.121 ⁶⁴	70.05 ²²	6.930 ⁸⁹	51.60 ⁸⁰
July 8.3	15.752 ³¹⁰	71.73 ¹⁴⁰	60.057 ⁹³	69.83 ²⁷	6.841 ¹²⁶	52.40 ⁵⁹
18.3	15.442 ³⁴⁴	73.13 ⁹²	59.964 ¹¹⁸	69.56 ³¹	6.715 ¹⁶⁰	52.99 ³⁴
28.3	15.098 ³⁶⁸	74.05 ⁴³	59.846 ¹³⁹	69.25 ³⁵	6.555 ¹⁸⁷	53.33 ⁸
Aug. 7.3	14.730 ³⁸³	74.48 ⁹	59.707 ¹⁵⁴	68.90 ³⁸	6.368 ²⁰⁸	53.41 ¹⁹
17.2	14.347 ³⁸⁸	74.39 ⁶⁰	59.553 ¹⁶⁴	68.52 ⁴²	6.160 ²¹⁸	53.22 ⁴⁵
27.2	13.959 ³⁸¹	73.79 ¹¹¹	59.389 ¹⁶⁴	68.10 ⁴³	5.942 ²¹⁹	52.77 ⁶⁹
Sept. 6.2	13.578 ³⁶⁴	72.68 ¹⁶⁰	59.225 ¹⁵⁶	67.67 ⁴²	5.723 ²⁰⁹	52.08 ⁹³
16.2	13.214 ³³²	71.08 ²⁰⁶	59.069 ¹³⁸	67.25 ³⁸	5.514 ¹⁸⁶	51.15 ¹¹²
26.1	12.882 ²⁹¹	69.02 ²⁵⁰	58.931 ¹¹¹	66.87 ³²	5.328 ¹⁵³	50.03 ¹²⁶
Oct. 6.1	12.591 ²³⁶	66.52 ²⁸⁹	58.820 ⁷⁷	66.55 ²²	5.175 ¹⁰⁷	48.77 ¹³⁶
16.1	12.355 ¹⁷¹	63.63 ³²²	58.743 ³³	66.33 ⁹	5.068 ⁵⁴	47.41 ¹³⁷
26.0	12.184 ⁹⁷	60.41 ³⁵⁰	58.710 ¹⁵	66.24 ⁹	5.014 ⁸	46.04 ¹³³
Nov. 5.0	12.087 ¹⁷	56.91 ³⁶⁹	58.725 ⁶⁷	66.33 ²⁷	5.022 ⁷¹	44.71 ¹²¹
15.0	12.070 ⁶⁸	53.22 ³⁷⁹	58.792 ¹¹⁹	66.60 ⁴⁸	5.093 ¹³⁷	43.50 ¹⁰³
25.0	12.138 ¹⁵³	49.43 ³⁸⁰	58.911 ¹⁷⁰	67.08 ⁷¹	5.230 ²⁰⁰	42.47 ⁸⁰
Dec. 4.9	12.291 ²³⁶	45.63 ³⁷⁰	59.081 ²¹⁶	67.79 ⁹²	5.430 ²⁵⁷	41.67 ⁵²
14.9	12.527 ³¹¹	41.93 ³⁴⁹	59.297 ²⁵⁶	68.71 ¹¹⁰	5.687 ³⁰⁶	41.15 ²³
24.9	12.838 ³⁷⁹	38.44 ³¹⁶	59.553 ²⁸⁶	69.81 ¹²⁶	5.993 ³⁴⁶	40.92 ¹⁰
34.9	13.217	35.28	59.839	71.07	6.339	41.02
Mean Place	14.331	54.34	58.010	69.41	4.150	45.87
Sec δ, Tan δ	1.955	+1.680	1.043	-0.295	1.323	-0.867
L α, L δ	-0.03	-0.3	+0.01	-0.3	+0.02	-0.2
ω α, ω δ	+0.07	-0.8	-0.01	-0.8	-0.04	-0.8
AUTHORITY	A. E.		.		A. E.	

APPARENT PLACES OF STARS, 1924. 377

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	α Coronæ Bor. Mag. 2.3		α Serpentis. Mag. 2.8		μ Serpentis. Mag. 3.6		
	R. A.	Dec. N.	R. A.	Dec. N.	R. A.	Dec. S.	
	^h 15 ^m 31	[°] 26 ['] 57	^h 15 ^m 40	[°] 6 ['] 39	^h 15 ^m 45	[°] 3 ['] 11	
Jan.	0.9 10.8 20.8 30.8	26.570 ²⁸⁶ 26.856 ³⁰⁹ 27.165 ³²² 27.487 ³²⁶	71.26 ²⁶⁶ 68.60 ²³⁶ 66.24 ¹⁹⁸ 64.26 ¹⁵⁴	29.933 ²⁷² 30.205 ²⁹¹ 30.496 ³⁰² 30.798 ³⁰⁵	55.41 ²¹¹ 53.30 ¹⁹⁹ 51.31 ¹⁸⁰ 49.51 ¹⁵³	37.681 ²⁷² 37.953 ²⁹² 38.245 ³⁰³ 38.548 ³⁰⁵	46.90 ¹⁷⁵ 48.65 ¹⁷¹ 50.36 ¹⁶¹ 51.97 ¹⁴⁵
Feb.	9.8 19.7 29.7	27.813 ³²¹ 28.134 ³⁰⁷ 28.441 ²⁸⁹	62.72 ¹⁰³ 61.69 ⁵² 61.17 ¹	31.103 ²⁹⁹ 31.402 ²⁸⁹ 31.691 ²⁷²	47.98 ¹²² 46.76 ⁸⁸ 45.88 ⁵¹	38.853 ³⁰¹ 39.154 ²⁹⁰ 39.444 ²⁷⁵	53.42 ¹²⁴ 54.66 ¹⁰⁰ 55.66 ⁷³
Mar.	10.7 20.7 30.6	28.730 ²⁶⁵ 28.995 ²³⁷ 29.232 ²⁰⁶	61.18 ⁵¹ 61.69 ⁹⁷ 62.66 ¹³⁹	31.963 ²⁵² 32.215 ²³⁰ 32.445 ²⁰⁴	45.37 ¹⁵ 45.22 ²⁰ 45.42 ⁵¹	39.719 ²⁵⁶ 39.975 ²³⁵ 40.210 ²¹¹	56.39 ⁴⁵ 56.84 ¹⁸ 57.02 ⁷
Apr.	9.6 19.6 29.5	29.438 ¹⁷⁴ 29.612 ¹⁴¹ 29.753 ¹⁰⁶	64.05 ¹⁷¹ 65.76 ¹⁹⁶ 67.72 ²¹⁵	32.649 ¹⁷⁸ 32.827 ¹⁵¹ 32.978 ¹²²	45.93 ⁷⁸ 46.71 ¹⁰⁰ 47.71 ¹¹⁶	40.421 ¹⁸⁵ 40.606 ¹⁵⁹ 40.765 ¹³²	56.95 ²⁹ 56.66 ⁴⁸ 56.18 ⁶²
May	9.5 19.5 29.5	29.859 ⁷¹ 29.930 ³⁷ 29.967 ²	69.87 ²²³ 72.10 ²²⁴ 74.34 ²¹⁷	33.100 ⁹³ 33.193 ⁶² 33.255 ³¹	48.87 ¹²⁷ 50.14 ¹³² 51.46 ¹³³	40.897 ¹⁰³ 41.000 ⁷³ 41.073 ⁴²	55.56 ⁷³ 54.83 ⁷⁹ 54.04 ⁸²
June	8.4 18.4 28.4	29.969 ³¹ 29.938 ⁶⁵ 29.873 ⁹⁵	76.51 ²⁰⁴ 78.55 ¹⁸⁵ 80.40 ¹⁶¹	33.286 ¹ 33.287 ³⁰ 33.257 ⁶⁰	52.79 ¹²⁸ 54.07 ¹²¹ 55.28 ¹¹⁰	41.115 ¹¹ 41.126 ²⁰ 41.106 ⁵²	53.22 ⁸² 52.40 ⁸⁰ 51.60 ⁷⁵
July	8.4 18.3 28.3	29.778 ¹²³ 29.655 ¹⁴⁹ 29.506 ¹⁶⁹	82.01 ¹³³ 83.34 ¹⁰² 84.36 ⁶⁹	33.197 ⁸⁹ 33.108 ¹¹⁴ 32.994 ¹³⁵	56.38 ⁹⁶ 57.34 ⁸⁰ 58.14 ⁶³	41.054 ⁸¹ 40.973 ¹⁰⁷ 40.866 ¹³⁰	50.85 ⁶⁸ 50.17 ⁶⁰ 49.57 ⁵¹
Aug.	7.3 17.2 27.2	29.337 ¹⁸³ 29.154 ¹⁹² 28.962 ¹⁹³	85.05 ³⁴ 85.39 ³ 85.36 ⁴⁰	32.859 ¹⁵² 32.707 ¹⁶³ 32.544 ¹⁶⁶	58.77 ⁴⁴ 59.21 ²⁴ 59.45 ³	40.736 ¹⁴⁸ 40.588 ¹⁶⁰ 40.428 ¹⁶⁴	49.06 ⁴² 48.64 ³⁰ 48.34 ¹⁹
Sept.	6.2 16.2 26.1	28.769 ¹⁸⁵ 28.584 ¹⁶⁹ 28.415 ¹⁴⁴	84.96 ⁷⁷ 84.19 ¹¹³ 83.06 ¹⁵⁰	32.378 ¹⁶⁰ 32.218 ¹⁴⁷ 32.071 ¹²⁴	59.48 ²⁰ 59.28 ⁴² 58.86 ⁶⁶	40.264 ¹⁶⁰ 40.104 ¹⁴⁶ 39.958 ¹²⁴	48.15 ⁵ 48.10 ⁹ 48.19 ²⁶
Oct.	6.1 16.1 26.1	28.271 ¹¹¹ 28.160 ⁶⁸ 28.092 ²²	81.56 ¹⁸⁴ 79.72 ²¹⁶ 77.56 ²⁴⁴	31.947 ⁹⁴ 31.853 ⁵⁵ 31.798 ¹¹	58.20 ⁹⁰ 57.30 ¹¹⁶ 56.14 ¹³⁹	39.834 ⁹⁴ 39.740 ⁵⁵ 39.685 ¹⁰	48.45 ⁴³ 48.88 ⁶³ 49.51 ⁸⁴
Nov.	5.0 15.0 25.0	28.070 ³⁰ 28.100 ⁸⁴ 28.184 ¹³⁷	75.12 ²⁶⁹ 72.43 ²⁸⁷ 69.56 ³⁰⁰	31.787 ³⁸ 31.825 ⁸⁸ 31.913 ¹³⁷	54.75 ¹⁶³ 53.12 ¹⁸³ 51.29 ²⁰¹	39.675 ³⁸ 39.713 ⁸⁹ 39.802 ¹³⁸	50.35 ¹⁰⁴ 51.39 ¹²⁵ 52.64 ¹⁴³
Dec.	4.9 14.9 24.9 34.9	28.321 ¹⁸⁸ 28.509 ²³² 28.741 ²⁶⁹ 29.010	66.56 ³⁰³ 63.53 ²⁹⁷ 60.56 ²⁸³ 57.73	32.050 ¹⁸³ 32.233 ²²³ 32.456 ²⁵⁷ 32.713	49.28 ²¹² 47.16 ²¹⁹ 44.97 ²¹⁸ 42.79	39.940 ¹⁸⁴ 40.124 ²²⁴ 40.348 ²⁵⁸ 40.606	54.07 ¹⁶⁰ 55.67 ¹⁷⁰ 57.37 ¹⁷⁷ 59.14
Mean Place	28.169	70.33	31.376	49.48	39.108	55.29	
Sec δ , Tan δ	1.122	+0.509	1.007	+0.117	1.002	-0.056	
L α , L δ	-0.01	-0.2	0.00	-0.2	0.00	-0.2	
ω α , ω δ	+0.02	-0.8	0.00	-0.8	0.00	-0.8	
AUTHORITY	A. E.		A. E.		A. E.		

378 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	ζ Ursæ Minoris. Mag. 4.3		ε Serpentis. Mag. 3.8		β Triang. Aust. Mag. 3.0	
	R. A.	Dec. N.	R. A.	Dec. N.	R. A.	Dec. S.
	^h 15 46 ^m s	[°] 78 ['] I	^h 15 47 ^m s	[°] 4 ['] 42	^h 15 48 ^m s	[°] 63 ['] II
Jan. 0.9	38.25 76	39.63 290	0.088 268	26.86 204	23.49 54	31.58 85
10.8	39.01 91	36.73 240	0.356 288	24.82 194	24.03 57	30.73 42
20.8	39.92 101	34.33 185	0.644 300	22.88 176	24.60 61	30.31 0
30.8	40.93 109	32.48 121	0.944 303	21.12 152	25.21 62	30.31 43
Feb. 9.8	42.02 112	31.27 54	1.247 300	19.60 123	25.83 62	30.74 83
19.7	43.14 111	30.73 14	1.547 290	18.37 90	26.45 60	31.57 119
29.7	44.25 105	30.87 80	1.837 274	17.47 56	27.05 57	32.76 153
Mar. 10.7	45.30 97	31.67 142	2.111 255	16.91 21	27.62 54	34.29 181
20.7	46.27 86	33.09 197	2.366 233	16.70 12	28.16 49	36.10 205
30.6	47.13 72	35.06 242	2.599 210	16.82 43	28.65 45	38.15 226
Apr. 9.6	47.85 55	37.48 280	2.809 184	17.25 69	29.10 39	40.41 241
19.6	48.40 38	40.28 304	2.993 157	17.94 90	29.49 33	42.82 252
29.5	48.78 20	43.32 317	3.150 129	18.84 107	29.82 27	45.34 257
May 9.5	48.98 1	46.49 321	3.279 100	19.91 118	30.09 19	47.91 259
19.5	48.99 17	49.70 312	3.379 69	21.09 123	30.28 13	50.50 254
29.5	48.82 34	52.82 295	3.448 39	22.32 125	30.41 5	53.04 245
June 8.4	48.48 49	55.77 268	3.487 8	23.57 121	30.46 2	55.49 229
18.4	47.99 64	58.45 235	3.495 24	24.78 115	30.44 10	57.78 208
28.4	47.35 78	60.80 195	3.471 55	25.93 106	30.34 17	59.86 181
July 8.4	46.57 88	62.75 150	3.416 84	26.99 92	30.17 24	61.67 150
18.3	45.69 96	64.25 102	3.332 110	27.91 78	29.93 30	63.17 114
28.3	44.73 103	65.27 51	3.222 133	28.69 63	29.63 34	64.31 74
Aug. 7.3	43.70 107	65.78 1	3.089 150	29.32 45	29.29 38	65.05 32
17.2	42.63 108	65.77 53	2.939 162	29.77 27	28.91 41	65.37 13
27.2	41.55 107	65.24 105	2.777 167	30.04 8	28.50 40	65.24 57
Sept. 6.2	40.48 104	64.19 155	2.610 162	30.12 13	28.10 39	64.67 100
16.2	39.44 98	62.64 202	2.448 149	29.99 34	27.71 37	63.67 140
26.1	38.46 88	60.62 246	2.299 128	29.65 57	27.34 30	62.27 174
Oct. 6.1	37.58 77	58.16 286	2.171 97	29.08 80	27.04 24	60.53 201
16.1	36.81 64	55.30 320	2.074 59	28.28 104	26.80 15	58.52 222
26.1	36.17 47	52.10 347	2.015 16	27.24 127	26.65 6	56.30 232
Nov. 5.0	35.70 30	48.63 367	1.999 33	25.97 150	26.59 4	53.98 233
15.0	35.40 10	44.96 379	2.032 82	24.47 171	26.63 15	51.65 224
25.0	35.30 9	41.17 379	2.114 132	22.76 188	26.78 25	49.41 206
Dec. 4.9	35.39 30	37.38 370	2.246 178	20.88 201	27.03 34	47.35 180
14.9	35.69 49	33.68 350	2.424 219	18.87 209	27.37 43	45.55 147
24.9	36.18 67	30.18 317	2.643 253	16.78 209	27.80 51	44.08 108
34.9	36.85	27.01	2.896	14.69	28.31	43.00
Mean Place	44.34	44.34	1.546	20.34	25.84	52.14
Sec δ, Tan δ	4.821	+4.716	1.003	+0.082	2.218	-1.980
L α, L δ	-0.10	-0.2	0.00	-0.2	+0.04	-0.2
ω α, ω δ	+0.17	-0.8	0.00	-0.8	-0.07	-0.8
AUTHORITY	A. E.		A. E.		A. E.	

APPARENT PLACES OF STARS, 1924. 379

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	γ Serpentis. Mag. 3.9		π Scorpii. Mag. 3.0		δ Scorpii. Mag. 2.5	
	R. A.	Dec. N.	R. A.	Dec. S.	R. A.	Dec. S.
	^h 15 ^m 52	[°] 15 ['] 54	^h 15 ^m 54	[°] 25 ['] 53	^h 15 ^m 55	[°] 22 ['] 24
Jan. 0.9	54.941 ²⁶⁴	34.98 ²⁴⁶	13.465 ²⁹⁹	34.37 ⁷²	48.635 ²⁹⁰	11.06 ⁸⁸
10.9	55.205 ²⁸⁶	32.52 ²²⁶	13.764 ³²⁰	35.09 ⁸⁹	48.925 ³¹³	11.94 ¹⁰⁰
20.8	55.491 ³⁰¹	30.26 ¹⁹⁸	14.084 ³³⁴	35.98 ¹⁰¹	49.238 ³²⁵	12.94 ¹¹⁰
30.8	55.792 ³⁰⁷	28.28 ¹⁶⁵	14.418 ³³⁷	36.99 ¹⁰⁸	49.563 ³²⁹	14.04 ¹¹³
Feb. 9.8	56.099 ³⁰⁵	26.63 ¹²⁴	14.755 ³³³	38.07 ¹¹²	49.892 ³²⁶	15.17 ¹¹⁴
19.7	56.404 ²⁹⁵	25.39 ⁸²	15.088 ³²⁴	39.19 ¹¹³	50.218 ³¹⁶	16.31 ¹¹⁰
29.7	56.699 ²⁸¹	24.57 ³⁷	15.412 ³⁰⁸	40.32 ¹⁰⁹	50.534 ³⁰²	17.41 ¹⁰³
Mar. 10.7	56.980 ²⁶³	24.20 ⁷	15.720 ²⁹⁰	41.41 ¹⁰⁴	50.836 ²⁸⁴	18.44 ⁹⁴
20.7	57.243 ²⁴⁰	24.27 ⁴⁸	16.010 ²⁶⁸	42.45 ⁹⁷	51.120 ²⁶²	19.38 ⁸⁴
30.6	57.483 ²¹⁶	24.75 ⁸⁶	16.278 ²⁴⁴	43.42 ⁸⁹	51.382 ²³⁹	20.22 ⁷⁴
Apr. 9.6	57.699 ¹⁸⁹	25.61 ¹¹⁸	16.522 ²¹⁸	44.31 ⁸¹	51.621 ²¹⁴	20.96 ⁶³
19.6	57.888 ¹⁶⁰	26.79 ¹⁴³	16.740 ¹⁹⁰	45.12 ⁷³	51.835 ¹⁸⁷	21.59 ⁵⁴
29.6	58.048 ¹³⁰	28.22 ¹⁶²	16.930 ¹⁶¹	45.85 ⁶⁶	52.022 ¹⁵⁸	22.13 ⁴⁶
May 9.5	58.178 ¹⁰⁰	29.84 ¹⁷³	17.091 ¹²⁹	46.51 ⁵⁹	52.180 ¹²⁷	22.59 ³⁸
19.5	58.278 ⁶⁸	31.57 ¹⁷⁸	17.220 ⁹⁶	47.10 ⁵²	52.307 ⁹⁵	22.97 ³¹
29.5	58.346 ³⁵	33.35 ¹⁷⁷	17.316 ⁶¹	47.62 ⁴⁵	52.402 ⁶²	23.28 ²⁵
June 8.4	58.381 ³	35.12 ¹⁶⁹	17.377 ²⁶	48.07 ³⁹	52.464 ²⁶	23.53 ¹⁹
18.4	58.384 ³⁰	36.81 ¹⁵⁷	17.403 ¹²	48.46 ³¹	52.490 ¹⁰	23.72 ¹³
28.4	58.354 ⁶³	38.38 ¹⁴¹	17.391 ⁴⁸	48.77 ²³	52.480 ⁴⁴	23.85 ⁷
July 8.4	58.291 ⁹²	39.79 ¹²⁰	17.343 ⁸²	49.00 ¹⁴	52.436 ⁷⁹	23.92 ¹
18.3	58.199 ¹²⁰	40.99 ⁹⁹	17.261 ¹¹⁴	49.14 ⁴	52.357 ¹⁰⁹	23.93 ⁷
28.3	58.079 ¹⁴²	41.98 ⁷³	17.147 ¹⁴²	49.18 ⁸	52.248 ¹³⁷	23.86 ¹⁵
Aug. 7.3	57.937 ¹⁶²	42.71 ⁴⁶	17.005 ¹⁶⁴	49.10 ¹⁹	52.111 ¹⁵⁸	23.71 ²²
17.3	57.775 ¹⁷³	43.17 ¹⁹	16.841 ¹⁷⁸	48.91 ³⁰	51.953 ¹⁷²	23.49 ³¹
27.2	57.602 ¹⁷⁹	43.36 ¹⁰	16.663 ¹⁸⁴	48.61 ⁴¹	51.781 ¹⁷⁹	23.18 ³⁷
Sept. 6.2	57.423 ¹⁷⁵	43.26 ⁴¹	16.479 ¹⁸⁰	48.20 ⁵⁰	51.602 ¹⁷⁵	22.81 ⁴³
16.2	57.248 ¹⁶³	42.85 ⁷⁰	16.299 ¹⁶⁶	47.70 ⁵⁷	51.427 ¹⁶²	22.38 ⁴⁷
26.1	57.085 ¹⁴²	42.15 ¹⁰¹	16.133 ¹⁴²	47.13 ⁶¹	51.265 ¹³⁸	21.91 ⁴⁷
Oct. 6.1	56.943 ¹¹¹	41.14 ¹³⁰	15.991 ¹⁰⁸	46.52 ⁶⁰	51.127 ¹⁰⁶	21.44 ⁴⁴
16.1	56.832 ⁷⁵	39.84 ¹⁶⁰	15.883 ⁶⁴	45.92 ⁵⁷	51.021 ⁶⁴	21.00 ³⁸
26.1	56.757 ³⁰	38.24 ¹⁸⁸	15.819 ¹⁵	45.35 ⁴⁷	50.957 ¹⁶	20.62 ²⁸
Nov. 5.0	56.727 ¹⁹	36.36 ²¹²	15.804 ³⁹	44.88 ³⁵	50.941 ³⁷	20.34 ¹⁴
15.0	56.746 ⁶⁹	34.24 ²³⁴	15.843 ⁹⁶	44.53 ¹⁸	50.978 ⁹¹	20.20 ⁴
25.0	56.815 ¹²⁰	31.90 ²⁵⁰	15.939 ¹⁵⁰	44.35 ²	51.069 ¹⁴⁴	20.24 ²³
Dec. 5.0	56.935 ¹⁶⁸	29.40 ²⁵⁹	16.089 ²⁰¹	44.37 ²²	51.213 ¹⁹⁵	20.47 ⁴²
14.9	57.103 ²¹¹	26.81 ²⁶²	16.290 ²⁴⁶	44.59 ⁴⁴	51.408 ²³⁸	20.89 ⁶³
24.9	57.314 ²⁴⁷	24.19 ²⁵⁶	16.536 ²⁸³	45.03 ⁶⁴	51.646 ²⁷⁴	21.52 ⁸⁰
34.9	57.561	21.63	16.819	45.67	51.920	22.32
Mean Place	56.488	30.86	14.973	48.00	50.134	23.89
Sec δ , Tan δ	1.040	+0.285	1.112	-0.486	1.082	-0.412
L α , L δ	-0.01	-0.2	+0.01	-0.2	+0.01	-0.2
ω α , ω δ	+0.01	-0.8	-0.02	-0.9	-0.01	-0.9
AUTHORITY	A. N.		A. N.		A. E.	

380 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	β^1 Scorpii. Mag. 2.9		δ Ophiuchi. Mag. 3.0		γ^2 Normæ. Mag. 4.1	
	R. A.	Dec. S.	R. A.	Dec. S.	R. A.	Dec. S.
	^h 16 ^m 0 ^s	[°] 19 ['] 35 ^{''}	^h 16 ^m 10 ^s	[°] 3 ['] 29 ^{''}	^h 16 ^m 14 ^s	[°] 49 ['] 57 ^{''}
Jan.	0.9 59.318 ²⁸² 10.9 59.600 ³⁰⁴ 20.8 59.904 ³¹⁸ 30.8 60.222 ³²³	42.78 ⁹⁸ 43.76 ¹⁰⁸ 44.84 ¹¹⁴ 45.98 ¹¹⁴	20.127 ²⁵⁶ 20.383 ²⁷⁹ 20.662 ²⁹⁴ 20.956 ³⁰¹	50.32 ¹⁶⁷ 51.99 ¹⁶⁴ 53.63 ¹⁵⁵ 55.18 ¹⁴⁰	6.473 ³⁷⁶ 6.849 ⁴¹² 7.261 ⁴³⁵ 7.696 ⁴⁴⁸	56.97 ⁵⁸ 56.39 ²⁶ 56.13 ⁶ 56.19 ³⁶
Feb.	9.8 60.545 ³²⁰ 19.8 60.865 ³¹² 29.7 61.177 ²⁹⁸ Mar. 10.7 61.475 ²⁸¹	47.12 ¹¹³ 48.25 ¹⁰⁵ 49.30 ⁹⁶ 50.26 ⁸⁵	21.257 ³⁰¹ 21.558 ²⁹⁴ 21.852 ²⁸² 22.134 ²⁶⁸	56.58 ¹¹⁹ 57.77 ⁹⁶ 58.73 ⁶⁹ 59.42 ⁴²	8.144 ⁴⁵⁰ 8.594 ⁴⁴³ 9.037 ⁴²⁸ 9.465 ⁴⁰⁸	56.55 ⁶⁴ 57.19 ⁹⁰ 58.09 ¹¹¹ 59.20 ¹³¹
Mar.	20.7 61.756 ²⁶¹ 30.6 62.017 ²³⁸ Apr. 9.6 62.255 ²¹⁴ 19.6 62.469 ¹⁸⁸	51.11 ⁷¹ 51.82 ⁵⁹ 52.41 ⁴⁷ 52.88 ³⁷	22.402 ²⁴⁹ 22.651 ²²⁹ 22.880 ²⁰⁵ 23.085 ¹⁸¹	59.84 ¹⁴ 59.98 ¹⁰ 59.88 ³³ 59.55 ⁵¹	9.873 ³⁸³ 10.256 ³⁵³ 10.609 ³¹⁹ 10.928 ²⁸²	60.51 ¹⁴⁷ 61.98 ¹⁷¹ 63.58 ¹⁶⁰ 65.29 ¹⁷⁸
Apr.	29.6 62.657 ¹⁶⁰ May 9.5 62.817 ¹³⁰ 19.5 62.947 ⁹⁹ 29.5 63.046 ⁶⁵	53.25 ²⁷ 53.52 ²⁰ 53.72 ¹³ 53.85 ⁸	23.266 ¹⁵⁵ 23.421 ¹²⁶ 23.547 ⁹⁷ 23.644 ⁶⁵	59.04 ⁶⁶ 58.38 ⁷⁷ 57.61 ⁸³ 56.78 ⁸⁶	11.210 ²⁴⁰ 11.450 ¹⁹⁵ 11.645 ¹⁴⁶ 11.791 ⁹⁶	67.07 ¹⁸⁴ 68.91 ¹⁸⁵ 70.76 ¹⁸³ 72.59 ¹⁷⁹
May	29.6 63.111 ³¹ 18.4 63.142 ⁵ 28.4 63.137 ⁴⁰ July 8.4 63.097 ⁷⁴	53.93 ⁴ 53.97 ¹ 53.96 ⁶ 53.90 ⁹	23.709 ³² 23.741 ² 23.739 ³⁵ 23.704 ⁶⁶	55.92 ⁸⁶ 55.06 ⁸² 54.24 ⁷⁷ 53.47 ⁷⁰	11.887 ⁴² 11.929 ¹² 11.917 ⁶⁷ 11.850 ¹¹⁸	74.38 ¹⁷⁰ 76.08 ¹⁵⁷ 77.65 ¹⁴⁰ 79.05 ¹¹⁹
June	18.3 63.023 ¹⁰⁴ 28.3 62.919 ¹³² Aug. 7.3 62.787 ¹⁵⁴ 17.3 62.633 ¹⁶⁸	53.81 ¹⁴ 53.67 ¹⁹ 53.48 ²⁴ 53.24 ²⁹	23.638 ⁹⁷ 23.541 ¹²³ 23.418 ¹⁴⁵ 23.273 ¹⁶¹	52.77 ⁶² 52.15 ⁵² 51.63 ⁴² 51.21 ³⁰	11.732 ¹⁶⁵ 11.567 ²⁰⁸ 11.359 ²⁴¹ 11.118 ²⁶⁴	80.24 ⁹⁴ 81.18 ⁶⁶ 81.84 ³⁴ 82.18 ²
July	27.2 62.465 ¹⁷⁶ 6.2 62.289 ¹⁷³ 16.2 62.116 ¹⁶² 26.2 61.954 ¹³⁹	52.95 ³³ 52.62 ³⁶ 52.26 ³⁷ 51.89 ³⁶	23.112 ¹⁶⁸ 22.944 ¹⁶⁸ 22.776 ¹⁵⁸ 22.618 ¹⁴⁰	50.91 ¹⁹ 50.72 ⁶ 50.66 ⁸ 50.74 ²³	10.854 ²⁷⁵ 10.579 ²⁷³ 10.306 ²⁵⁷ 10.049 ²²⁷	82.20 ³¹ 81.89 ⁶⁴ 81.25 ⁹⁴ 80.31 ¹²²
Aug.	26.2 61.954 ¹³⁹ Oct. 6.1 61.815 ¹⁰⁸ 16.1 61.707 ⁶⁷ 26.1 61.640 ²¹ Nov. 5.0 61.619 ³¹	51.53 ³¹ 51.22 ²³ 50.99 ¹¹ 50.88 ³	22.478 ¹¹¹ 22.367 ⁷⁶ 22.291 ³² 22.259 ¹⁵	50.97 ⁴¹ 51.38 ⁵⁹ 51.97 ⁷⁷ 52.74 ⁹⁸	9.822 ¹⁸² 9.640 ¹²⁷ 9.513 ⁶¹ 9.452 ¹²	79.09 ¹⁴⁴ 77.65 ¹⁶⁰ 76.05 ¹⁶⁸ 74.37 ¹⁷⁰
Sept.	15.0 61.650 ⁸⁴ 25.0 61.734 ¹³⁶ Dec. 5.0 61.870 ¹⁸⁶ 14.9 62.056 ²³⁰ 24.9 62.286 ²⁶⁵ 34.9 62.551	50.91 ²⁰ 51.11 ³⁸ 51.49 ⁵⁸ 52.07 ⁷⁶ 52.83 ⁹¹ 53.74	22.274 ⁶⁴ 22.338 ¹¹⁵ 22.453 ¹⁶² 22.615 ²⁰³ 22.818 ²⁴⁰ 23.058	53.72 ¹¹⁷ 54.89 ¹³⁵ 56.24 ¹⁵¹ 57.75 ¹⁶² 59.37 ¹⁶⁹ 61.06	9.464 ⁸⁷ 9.551 ¹⁶¹ 9.712 ²³³ 9.945 ²⁹⁵ 10.240 ³⁵¹ 10.591	72.67 ¹⁶³ 71.04 ¹⁴⁸ 69.56 ¹²⁹ 68.27 ¹⁰⁴ 67.23 ⁷⁴ 66.49
Mean Place	60.830	54.92	21.650	58.91	8.513	74.39
Sec δ , Tan δ	1.061	-0.356	1.002	-0.061	1.555	-1.190
L α , L δ	+0.01	-0.2	0.00	-0.2	+0.03	-0.2
ω α , ω δ	-0.01	-0.9	0.00	-0.9	-0.04	-0.9
AUTHORITY	A. E.		A. E.		A. E.	

APPARENT PLACES OF STARS, 1924. 381

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	ε Ophiuchi. Mag. 3·3		σ Scorpii. Mag. 3·1		γ Herculis. Mag. 3·8	
	R. A.	Dec. S.	R. A.	Dec. S.	R. A.	Dec. N.
	^h 16 ^m 14	[°] 4 ['] 30	^h 16 ^m 16	[°] 25 ['] 24	^h 16 ^m 18	[°] 19 ['] 19
Jan. 0·9	16·340 ²⁵⁴	21·31 ¹⁶¹	32·286 ²⁸²	29·54 ⁵⁹	32·342 ²⁴⁵	54·12 ²⁵⁵
10·9	16·594 ²⁷⁹	22·92 ¹⁵⁹	32·568 ³⁰⁷	30·13 ⁷⁵	32·587 ²⁷²	51·57 ²³⁵
20·9	16·873 ²⁹³	24·51 ¹⁵⁰	32·875 ³²⁴	30·88 ⁸⁵	32·859 ²⁹¹	49·22 ²⁰⁷
30·8	17·166 ³⁰¹	26·01 ¹³⁷	33·199 ³³¹	31·73 ⁹²	33·150 ³⁰¹	47·15 ¹⁷¹
Feb. 9·8	17·467 ³⁰¹	27·38 ¹¹⁷	33·530 ³³²	32·65 ⁹⁶	33·451 ³⁰⁵	45·44 ¹³⁰
19·8	17·768 ²⁹⁵	28·55 ⁹⁵	33·862 ³²⁶	33·61 ⁹⁵	33·756 ³⁰¹	44·14 ⁸⁴
29·7	18·063 ²⁸⁴	29·50 ⁶⁹	34·188 ³¹⁵	34·56 ⁹²	34·057 ²⁹²	43·30 ³⁶
Mar. 10·7	18·347 ²⁷⁰	30·19 ⁴³	34·503 ²⁹⁹	35·48 ⁸⁷	34·349 ²⁷⁶	42·94 ¹¹
20·7	18·617 ²⁵²	30·62 ¹⁶	34·802 ²⁸²	36·35 ⁸⁰	34·625 ²⁵⁷	43·05 ⁵⁶
30·7	18·869 ²³²	30·78 ⁸	35·084 ²⁶⁰	37·15 ⁷³	34·882 ²³⁶	43·61 ⁹⁸
Apr. 9·6	19·101 ²¹⁰	30·70 ²⁹	35·344 ²³⁷	37·88 ⁶⁶	35·118 ²¹⁰	44·59 ¹³²
19·6	19·311 ¹⁸⁵	30·41 ⁴⁸	35·581 ²¹¹	38·54 ⁵⁹	35·328 ¹⁸²	45·91 ¹⁶¹
29·6	19·496 ¹⁵⁹	29·93 ⁶²	35·792 ¹⁸³	39·13 ⁵⁴	35·510 ¹⁵⁴	47·52 ¹⁸⁴
May 9·6	19·655 ¹³¹	29·31 ⁷²	35·975 ¹⁵²	39·67 ⁴⁹	35·664 ¹²²	49·36 ¹⁹⁷
19·5	19·786 ¹⁰¹	28·59 ⁷⁹	36·127 ¹¹⁹	40·16 ⁴³	35·786 ⁸⁹	51·33 ²⁰⁴
29·5	19·887 ⁶⁹	27·80 ⁸²	36·246 ⁸⁴	40·59 ⁴⁰	35·875 ⁵⁴	53·37 ²⁰⁴
June 8·5	19·956 ³⁷	26·98 ⁸²	36·330 ⁴⁷	40·99 ³⁵	35·929 ²⁰	55·41 ¹⁹⁸
18·4	19·993 ²	26·16 ⁷⁸	36·377 ⁹	41·34 ³⁰	35·949 ¹⁶	57·39 ¹⁸⁵
28·4	19·995 ³¹	25·38 ⁷⁴	36·386 ²⁹	41·64 ²⁵	35·933 ⁵¹	59·24 ¹⁶⁸
July 8·4	19·964 ⁶⁴	24·64 ⁶⁷	36·357 ⁶⁶	41·89 ¹⁸	35·882 ⁸⁴	60·92 ¹⁴⁷
18·4	19·900 ⁹⁴	23·97 ⁵⁹	36·291 ¹⁰²	42·07 ⁹	35·798 ¹¹⁵	62·39 ¹²³
28·3	19·806 ¹²²	23·38 ⁵¹	36·189 ¹³²	42·16 ¹	35·683 ¹⁴²	63·62 ⁹⁵
Aug. 7·3	19·684 ¹⁴⁴	22·87 ⁴²	36·057 ¹⁵⁸	42·17 ⁸	35·541 ¹⁶⁴	64·57 ⁶⁶
17·3	19·540 ¹⁶⁰	22·45 ³¹	35·899 ¹⁷⁶	42·09 ¹⁹	35·377 ¹⁸¹	65·23 ³⁵
27·2	19·380 ¹⁶⁸	22·14 ²⁰	35·723 ¹⁸⁶	41·90 ²⁹	35·196 ¹⁸⁹	65·58 ³
Sept. 6·2	19·212 ¹⁶⁹	21·94 ⁸	35·537 ¹⁸⁶	41·61 ³⁸	35·007 ¹⁹⁰	65·61 ³⁰
16·2	19·043 ¹⁶⁰	21·86 ⁵	35·351 ¹⁷⁶	41·23 ⁴⁵	34·817 ¹⁸²	65·31 ⁶³
26·2	18·883 ¹⁴¹	21·91 ¹⁹	35·175 ¹⁵⁶	40·78 ⁵⁰	34·635 ¹⁶³	64·68 ⁹⁵
Oct. 6·1	18·742 ¹¹⁴	22·10 ³⁶	35·019 ¹²⁵	40·28 ⁵²	34·472 ¹³⁷	63·73 ¹²⁹
16·1	18·628 ⁷⁸	22·46 ⁵³	34·894 ⁸⁴	39·76 ⁴⁹	34·335 ¹⁰²	62·44 ¹⁶⁰
26·1	18·550 ³⁶	22·99 ⁷⁰	34·810 ³⁶	39·27 ⁴³	34·233 ⁵⁹	60·84 ¹⁹⁰
Nov. 5·1	18·514 ¹²	23·69 ⁹¹	34·774 ¹⁶	38·84 ³³	34·174 ¹²	58·94 ²¹⁷
15·0	18·526 ⁶²	24·60 ¹¹⁰	34·790 ⁷¹	38·51 ¹⁹	34·162 ³⁹	56·77 ²³⁹
25·0	18·588 ¹¹²	25·70 ¹²⁸	34·861 ¹²⁷	38·32 ²	34·201 ⁹⁰	54·38 ²⁵⁷
Dec. 5·0	18·700 ¹⁵⁹	26·98 ¹⁴³	34·988 ¹⁷⁸	38·30 ¹⁶	34·291 ¹⁴⁰	51·81 ²⁶⁸
14·9	18·859 ²⁰¹	28·41 ¹⁵⁵	35·166 ²²⁵	38·46 ³⁴	34·431 ¹⁸⁵	49·13 ²⁷⁰
24·9	19·060 ²³⁸	29·96 ¹⁶²	35·391 ²⁶⁴	38·80 ⁵³	34·616 ²²⁵	46·43 ²⁶⁶
34·9	19·298	31·58	35·655	39·33	34·841	43·77
Mean Place	17·877	30·12	33·908	42·56	33·996	49·95
Sec δ, Tan δ	1·003	—0·079	1·107	—0·475	1·060	+0·351
L α, L δ	0·00	—0·2	+0·01	—0·2	—0·01	—0·2
ω α, ω δ	0·00	—0·9	—0·01	—0·9	+0·01	—0·9
AUTHORITY	A. E.		A. N.		A. E.	

382 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	η Draconis. Mag. 2.9		α Scorpii. Mag. 1.2		β Herculis. Mag. 2.8	
	R. A.	Dec. N.	R. A.	Dec. S.	R. A.	Dec. N.
	^h 16 ^m 22	[°] 61 ['] 40	^h 16 ^m 24	[°] 26 ['] 15	^h 16 ^m 26	[°] 21 ['] 39
Jan. 0.9	54.58 ^s 34	67.99 ^s 330	42.974 ^s 278	39.77 ^s 51	55.379 ^s 238	18.85 ^s 264
10.9	54.92 ^s 40	64.69 ^s 291	43.252 ^s 305	40.28 ^s 64	55.617 ^s 267	16.21 ^s 243
20.9	55.32 ^s 46	61.78 ^s 242	43.557 ^s 322	40.92 ^s 76	55.884 ^s 288	13.78 ^s 214
30.8	55.78 ^s 50	59.36 ^s 184	43.879 ^s 332	41.68 ^s 84	56.172 ^s 301	11.64 ^s 176
Feb. 9.8	56.28 ^s 51	57.52 ^s 120	44.211 ^s 334	42.52 ^s 88	56.473 ^s 306	9.88 ^s 134
19.8	56.79 ^s 52	56.32 ^s 53	44.545 ^s 329	43.40 ^s 89	56.779 ^s 304	8.54 ^s 87
29.7	57.31 ^s 51	55.79 ^s 15	44.874 ^s 320	44.29 ^s 86	57.083 ^s 296	7.67 ^s 37
Mar. 10.7	57.82 ^s 49	55.94 ^s 82	45.194 ^s 306	45.15 ^s 83	57.379 ^s 282	7.30 ^s 13
20.7	58.31 ^s 44	56.76 ^s 142	45.500 ^s 289	45.98 ^s 76	57.661 ^s 264	7.43 ^s 59
30.7	58.75 ^s 40	58.18 ^s 198	45.789 ^s 268	46.74 ^s 71	57.925 ^s 242	8.02 ^s 103
Apr. 9.6	59.15 ^s 34	60.16 ^s 243	46.057 ^s 245	47.45 ^s 65	58.167 ^s 218	9.05 ^s 139
19.6	59.49 ^s 27	62.59 ^s 279	46.302 ^s 220	48.10 ^s 60	58.385 ^s 191	10.44 ^s 171
29.6	59.76 ^s 20	65.38 ^s 305	46.522 ^s 192	48.70 ^s 55	58.576 ^s 161	12.15 ^s 193
May 9.6	59.96 ^s 13	68.43 ^s 319	46.714 ^s 162	49.25 ^s 50	58.737 ^s 129	14.08 ^s 208
19.5	60.09 ^s 5	71.62 ^s 323	46.876 ^s 128	49.75 ^s 47	58.866 ^s 95	16.16 ^s 216
29.5	60.14 ^s 3	74.85 ^s 317	47.004 ^s 93	50.22 ^s 43	58.961 ^s 60	18.32 ^s 217
June 8.5	60.11 ^s 9	78.02 ^s 301	47.097 ^s 55	50.65 ^s 39	59.021 ^s 25	20.49 ^s 210
18.4	60.02 ^s 17	81.03 ^s 277	47.152 ^s 17	51.04 ^s 34	59.046 ^s 12	22.59 ^s 198
28.4	59.85 ^s 23	83.80 ^s 245	47.169 ^s 23	51.38 ^s 30	59.034 ^s 49	24.57 ^s 180
July 8.4	59.62 ^s 29	86.25 ^s 208	47.146 ^s 61	51.68 ^s 23	58.985 ^s 83	26.37 ^s 158
18.4	59.33 ^s 34	88.33 ^s 166	47.085 ^s 98	51.91 ^s 15	58.902 ^s 115	27.95 ^s 132
28.3	58.99 ^s 39	89.99 ^s 119	46.987 ^s 129	52.06 ^s 7	58.787 ^s 143	29.27 ^s 103
Aug. 7.3	58.60 ^s 42	91.18 ^s 70	46.858 ^s 157	52.13 ^s 4	58.644 ^s 168	30.30 ^s 73
17.3	58.18 ^s 45	91.88 ^s 19	46.701 ^s 176	52.09 ^s 14	58.476 ^s 185	31.03 ^s 40
27.2	57.73 ^s 45	92.07 ^s 33	46.525 ^s 188	51.95 ^s 25	58.291 ^s 195	31.43 ^s 7
Sept. 6.2	57.28 ^s 45	91.74 ^s 85	46.337 ^s 189	51.70 ^s 34	58.096 ^s 197	31.50 ^s 28
16.2	56.83 ^s 43	90.89 ^s 136	46.148 ^s 181	51.36 ^s 43	57.899 ^s 190	31.22 ^s 63
26.2	56.40 ^s 41	89.53 ^s 185	45.967 ^s 161	50.93 ^s 49	57.709 ^s 173	30.59 ^s 98
Oct. 6.1	55.99 ^s 36	87.68 ^s 232	45.806 ^s 131	50.44 ^s 52	57.536 ^s 147	29.61 ^s 133
16.1	55.63 ^s 30	85.36 ^s 274	45.675 ^s 92	49.92 ^s 51	57.389 ^s 112	28.28 ^s 165
26.1	55.33 ^s 23	82.62 ^s 311	45.583 ^s 45	49.41 ^s 46	57.277 ^s 71	26.63 ^s 196
Nov. 5.1	55.10 ^s 15	79.51 ^s 341	45.538 ^s 7	48.95 ^s 38	57.206 ^s 23	24.67 ^s 224
15.0	54.95 ^s 7	76.10 ^s 364	45.545 ^s 63	48.57 ^s 26	57.183 ^s 28	22.43 ^s 248
25.0	54.88 ^s 2	72.46 ^s 377	45.608 ^s 119	48.31 ^s 10	57.211 ^s 79	19.95 ^s 265
Dec. 5.0	54.90 ^s 12	68.69 ^s 380	45.727 ^s 171	48.21 ^s 7	57.290 ^s 130	17.30 ^s 277
14.9	55.02 ^s 21	64.89 ^s 372	45.898 ^s 218	48.28 ^s 25	57.420 ^s 176	14.53 ^s 280
24.9	55.23 ^s 29	61.17 ^s 351	46.116 ^s 259	48.53 ^s 43	57.596 ^s 218	11.73 ^s 274
34.9	55.52 ^s	57.66 ^s	46.375 ^s	48.96 ^s	57.814 ^s	8.99 ^s
Mean Place	57.55	69.18	44.648	52.73	57.075	14.83
Sec δ , Tan δ	2.108	+1.856	1.115	-0.493	1.076	+0.397
L α , L δ	-0.04	-0.2	+0.01	-0.2	-0.01	-0.2
ω α , ω δ	+0.05	-0.9	-0.01	-0.9	+0.01	-0.9
AUTHORITY	A. E.		A. E.		A. E.	

APPARENT PLACES OF STARS, 1924.. 383

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	λ Ophiuchi. Mag. 3·9		τ Scorpii. Mag. 2·9		ζ Ophiuchi. Mag. 2·7	
	R. A.	Dec. N.	R. A.	Dec. S.	R. A.	Dec. S.
	^h 16 ^m 27	[°] 2 ['] 8	^h 16 ^m 31	[°] 28 ['] 3	^h 16 ^m 32	[°] 10 ['] 24
Jan. 0·9	3·134 ^s ₂₄₁	63·82 ₁₈₉	7·128 ^s ₂₇₇	22·05 ₃₇	56·690 ^s ₂₄₆	41·77 ₁₂₇
10·9	3·375 ₂₆₆	61·93 ₁₈₀	7·405 ₃₀₄	22·42 ₅₂	56·936 ₂₇₃	43·04 ₁₂₈
20·9	3·641 ₂₈₃	60·13 ₁₆₆	7·709 ₃₂₄	22·94 ₆₅	57·209 ₂₉₁	44·32 ₁₂₆
30·8	3·924 ₂₉₃	58·47 ₁₄₇	8·033 ₃₃₄	23·59 ₇₄	57·500 ₃₀₀	45·58 ₁₁₇
Feb. 9·8	4·217 ₂₉₅	57·00 ₁₂₁	8·367 ₃₃₈	24·33 ₈₀	57·800 ₃₀₃	46·75 ₁₀₅
19·8	4·512 ₂₉₃	55·79 ₉₂	8·705 ₃₃₄	25·13 ₈₂	58·103 ₃₀₁	47·80 ₈₉
29·7	4·805 ₂₈₄	54·87 ₆₀	9·039 ₃₂₅	25·95 ₈₃	58·404 ₂₉₃	48·69 ₇₀
Mar. 10·7	5·089 ₂₇₁	54·27 ₂₆	9·364 ₃₁₃	26·78 ₈₀	58·697 ₂₈₂	49·39 ₄₉
20·7	5·360 ₂₅₅	54·01 ₅	9·677 ₂₉₆	27·58 ₇₇	58·979 ₂₆₆	49·88 ₂₉
30·7	5·615 ₂₃₇	54·06 ₅	9·973 ₂₇₆	28·35 ₇₂	59·245 ₂₄₈	50·17 ₈
Apr. 9·6	5·852 ₂₁₅	54·41 ₆₁	10·249 ₂₅₄	29·07 ₆₈	59·493 ₂₂₈	50·25 ₉
19·6	6·067 ₁₉₂	55·02 ₈₄	10·503 ₂₃₀	29·75 ₆₄	59·721 ₂₀₆	50·16 ₂₃
29·6	6·259 ₁₆₆	55·86 ₁₀₀	10·733 ₂₀₂	30·39 ₆₂	59·927 ₁₈₀	49·93 ₃₅
May 9·6	6·425 ₁₃₈	56·86 ₁₁₂	10·935 ₁₇₀	31·01 ₅₈	60·107 ₁₅₂	49·58 ₄₄
19·5	6·563 ₁₀₈	57·98 ₁₁₉	11·105 ₁₃₇	31·59 ₅₅	60·259 ₁₂₃	49·14 ₅₀
29·5	6·671 ₇₇	59·17 ₁₂₁	11·242 ₁₀₁	32·14 ₅₃	60·382 ₉₀	48·64 ₅₃
June 8·5	6·748 ₄₃	60·38 ₁₁₉	11·343 ₆₃	32·67 ₄₉	60·472 ₅₆	48·11 ₅₂
18·4	6·791 ₉	61·57 ₁₁₃	11·406 ₂₃	33·16 ₄₅	60·528 ₂₁	47·59 ₅₂
28·4	6·800 ₂₆	62·70 ₁₀₅	11·429 ₁₈	33·61 ₃₉	60·549 ₁₅	47·07 ₄₉
July 8·4	6·774 ₅₉	63·75 ₉₄	11·411 ₅₇	34·00 ₃₃	60·534 ₅₁	46·58 ₄₅
18·4	6·715 ₉₁	64·69 ₈₁	11·354 ₉₅	34·33 ₂₄	60·483 ₈₄	46·13 ₄₁
28·3	6·624 ₁₂₀	65·50 ₆₇	11·259 ₁₂₉	34·57 ₁₄	60·399 ₁₁₄	45·72 ₃₆
Aug. 7·3	6·504 ₁₄₃	66·17 ₅₁	11·130 ₁₅₈	34·71 ₄	60·285 ₁₄₀	45·36 ₃₁
17·3	6·361 ₁₆₁	66·68 ₃₄	10·972 ₁₇₉	34·75 ₉	60·145 ₁₆₀	45·05 ₂₆
27·2	6·200 ₁₇₂	67·02 ₁₈	10·793 ₁₉₁	34·66 ₂₀	59·985 ₁₇₁	44·79 ₂₁
Sept. 6·2	6·028 ₁₇₄	67·20 ₁	10·602 ₁₉₅	34·46 ₃₂	59·814 ₁₇₄	44·58 ₁₅
16·2	5·854 ₁₆₇	67·19 ₂₀	10·407 ₁₈₆	34·14 ₄₄	59·640 ₁₆₉	44·43 ₈
26·2	5·687 ₁₅₀	66·99 ₄₀	10·221 ₁₆₇	33·70 ₅₂	59·471 ₁₅₂	44·35 ₁
Oct. 6·1	5·537 ₁₂₅	66·59 ₆₁	10·054 ₁₃₈	33·18 ₅₆	59·319 ₁₂₆	44·36 ₁₂
16·1	5·412 ₉₁	65·98 ₈₂	9·916 ₁₀₀	32·62 ₅₈	59·193 ₉₂	44·48 ₂₄
26·1	5·321 ₅₁	65·16 ₁₀₄	9·816 ₅₂	32·04 ₅₅	59·101 ₅₀	44·72 ₃₈
Nov. 5·1	5·270 ₄	64·12 ₁₂₆	9·764 ₁	31·49 ₄₈	59·051 ₃	45·10 ₅₄
15·0	5·266 ₄₅	62·86 ₁₄₆	9·765 ₅₇	31·01 ₃₈	59·048 ₄₇	45·64 ₇₀
25·0	5·311 ₉₅	61·40 ₁₆₅	9·822 ₁₁₃	30·63 ₂₂	59·095 ₉₇	46·34 ₈₇
Dec. 5·0	5·406 ₁₄₂	59·75 ₁₇₈	9·935 ₁₆₈	30·41 ₇	59·192 ₁₄₆	47·21 ₁₀₂
14·9	5·548 ₁₈₅	57·97 ₁₈₈	10·103 ₂₁₅	30·34 ₁₂	59·338 ₁₉₁	48·23 ₁₁₅
24·9	5·733 ₂₂₃	56·09 ₁₉₁	10·318 ₂₅₇	30·46 ₂₉	59·529 ₂₂₈	49·38 ₁₂₅
34·9	5·956	54·18	10·575	30·75	59·757	50·63
Mean Place	4·718	56·27	8·848	35·14	58·303	51·64
Sec δ, Tan δ	1·001	+0·037	1·133	-0·533	1·017	-0·184
L α, L δ	0·00	-0·2	+0·01	-0·2	0·00	-0·1
ω α, ω δ	0·00	-0·9	-0·01	-0·9	0·00	-0·9
AUTHORITY	A. N.		A. N.		A. E.	

384 APPARENT PLACES OF STARS, 1924

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	24 Scorpii. Mag. 5.0		ζ Herculis. Mag. 3.0		η Herculis. Mag. 3.6		
	R. A.	Dec. S.	R. A.	Dec. N.	R. A.	Dec. N.	
	^h 16 ^m 37	[°] 17 ['] 35	^h 16 ^m 38	[°] 31 ['] 44	^h 16 ^m 40	[°] 39 ['] 3	
Jan.	0.9 8.830 ^s ₂₅₂ 10.9 9.082 ^s ₂₈₀ 20.9 9.362 ^s ₂₉₈ 30.8 9.660 ^s ₃₀₈	35.72 ^s ₈₇ 36.59 ^s ₉₆ 37.55 ^s ₉₈ 38.53 ^s ₉₈	23.402 ^s ₂₃₂ 23.634 ^s ₂₆₇ 23.901 ^s ₂₉₄ 24.195 ^s ₃₁₀	25.57 ^s ₂₉₅ 22.62 ^s ₂₇₀ 19.92 ^s ₂₃₆ 17.56 ^s ₁₉₃	15.387 ^s ₂₃₈ 15.625 ^s ₂₇₉ 15.904 ^s ₃₀₉ 16.213 ^s ₃₃₀	59.30 ^s ₃₁₅ 56.15 ^s ₂₈₆ 53.29 ^s ₂₄₈ 50.81 ^s ₂₀₁	
Feb.	9.8 19.8 29.8	9.968 ^s ₃₁₃ 10.281 ^s ₃₁₀ 10.591 ^s ₃₀₃	39.51 ^s ₉₂ 40.43 ^s ₈₄ 41.27 ^s ₇₂	24.505 ^s ₃₂₁ 24.826 ^s ₃₂₁ 25.147 ^s ₃₁₅	15.63 ^s ₁₄₂ 14.21 ^s ₈₈ 13.33 ^s ₃₂	16.543 ^s ₃₄₂ 16.885 ^s ₃₄₅ 17.230 ^s ₃₄₀	48.80 ^s ₁₄₆ 47.34 ^s ₈₈ 46.46 ^s ₂₇
Mar.	10.7 20.7 30.7	10.894 ^s ₂₉₂ 11.186 ^s ₂₇₇ 11.463 ^s ₂₆₀	41.99 ^s ₅₉ 42.58 ^s ₄₆ 43.04 ^s ₃₃	25.462 ^s ₃₀₄ 25.766 ^s ₂₈₅ 26.051 ^s ₂₆₃	13.01 ^s ₂₆ 13.27 ^s ₇₈ 14.05 ^s ₁₂₈	17.570 ^s ₃₂₇ 17.897 ^s ₃₀₇ 18.204 ^s ₂₈₃	46.19 ^s ₃₃ 46.52 ^s ₉₁ 47.43 ^s ₁₄₃
Apr.	9.6 19.6 29.6	11.723 ^s ₂₄₀ 11.963 ^s ₂₁₆ 12.179 ^s ₁₉₂	43.37 ^s ₂₀ 43.57 ^s ₁₀ 43.67 ^s ₂	26.314 ^s ₂₃₆ 26.550 ^s ₂₀₇ 26.757 ^s ₁₇₃	15.33 ^s ₁₇₂ 17.05 ^s ₂₀₆ 19.11 ^s ₂₃₃	18.487 ^s ₂₅₃ 18.740 ^s ₂₁₉ 18.959 ^s ₁₈₁	48.86 ^s ₁₈₉ 50.75 ^s ₂₂₆ 53.01 ^s ₂₅₄
May	9.6 19.5 29.5	12.371 ^s ₁₆₄ 12.535 ^s ₁₃₃ 12.668 ^s ₉₉	43.69 ^s ₅ 43.64 ^s ₉ 43.55 ^s ₁₁	26.930 ^s ₁₃₈ 27.068 ^s ₁₀₀ 27.168 ^s ₆₂	21.44 ^s ₂₅₀ 23.94 ^s ₂₆₀ 26.54 ^s ₂₆₀	19.140 ^s ₁₄₂ 19.282 ^s ₉₉ 19.381 ^s ₅₆	55.55 ^s ₂₇₃ 58.28 ^s ₂₈₃ 61.11 ^s ₂₈₂
June	8.5 18.5 28.4	12.767 ^s ₆₄ 12.831 ^s ₂₇ 12.858 ^s ₁₁	43.44 ^s ₁₂ 43.32 ^s ₁₃ 43.19 ^s ₁₃	27.230 ^s ₂₁ 27.251 ^s ₂₀ 27.231 ^s ₆₀	29.14 ^s ₂₅₂ 31.66 ^s ₂₃₉ 34.05 ^s ₂₁₈	19.437 ^s ₁₁ 19.448 ^s ₃₃ 19.415 ^s ₇₇	63.93 ^s ₂₇₄ 66.67 ^s ₂₅₈ 69.25 ^s ₂₃₅
July	8.4 18.4 28.3	12.847 ^s ₄₇ 12.800 ^s ₈₄ 12.716 ^s ₁₁₅	43.06 ^s ₁₄ 42.92 ^s ₁₃ 42.79 ^s ₁₅	27.171 ^s ₉₈ 27.073 ^s ₁₃₄ 26.939 ^s ₁₆₅	36.23 ^s ₁₉₂ 38.15 ^s ₁₆₀ 39.75 ^s ₁₂₇	19.338 ^s ₁₁₉ 19.219 ^s ₁₅₆ 19.063 ^s ₁₉₁	71.60 ^s ₂₀₇ 73.67 ^s ₁₇₂ 75.39 ^s ₁₃₅
Aug.	7.3 17.3 27.3	12.601 ^s ₁₄₃ 12.458 ^s ₁₆₃ 12.295 ^s ₁₇₇	42.64 ^s ₁₆ 42.48 ^s ₁₈ 42.30 ^s ₂₀	26.774 ^s ₁₉₂ 26.582 ^s ₂₁₂ 26.370 ^s ₂₂₃	41.02 ^s ₉₀ 41.92 ^s ₅₁ 42.43 ^s ₁₁	18.872 ^s ₂₁₈ 18.654 ^s ₂₃₉ 18.415 ^s ₂₅₂	76.74 ^s ₉₅ 77.69 ^s ₅₁ 78.20 ^s ₇
Sept.	6.2 16.2 26.2	12.118 ^s ₁₈₀ 11.938 ^s ₁₇₅ 11.763 ^s ₁₅₈	42.10 ^s ₂₁ 41.89 ^s ₂₁ 41.68 ^s ₁₉	26.147 ^s ₂₂₇ 25.920 ^s ₂₂₂ 25.698 ^s ₂₀₅	42.54 ^s ₃₁ 42.23 ^s ₇₃ 41.50 ^s ₁₁₄	18.163 ^s ₂₅₅ 17.908 ^s ₂₄₉ 17.659 ^s ₂₃₂	78.27 ^s ₃₉ 77.88 ^s ₈₄ 77.04 ^s ₁₂₉
Oct.	6.2 16.1 26.1	11.605 ^s ₁₃₂ 11.473 ^s ₉₆ 11.377 ^s ₅₄	41.49 ^s ₁₅ 41.34 ^s ₉ 41.25 ^s ₀	25.493 ^s ₁₈₀ 25.313 ^s ₁₄₄ 25.169 ^s ₁₀₂	40.36 ^s ₁₅₃ 38.83 ^s ₁₉₂ 36.91 ^s ₂₂₇	17.427 ^s ₂₀₆ 17.221 ^s ₁₆₈ 17.053 ^s ₁₂₄	75.75 ^s ₁₇₂ 74.03 ^s ₂₁₃ 71.90 ^s ₂₅₀
Nov.	5.1 15.0 25.0	11.323 ^s ₅ 11.318 ^s ₄₆ 11.364 ^s ₉₉	41.25 ^s ₁₂ 41.37 ^s ₂₆ 41.63 ^s ₄₁	25.067 ^s ₅₃ 25.014 ^s ₁ 25.015 ^s ₅₆	34.64 ^s ₂₅₈ 32.06 ^s ₂₈₅ 29.21 ^s ₃₀₃	16.929 ^s ₇₁ 16.858 ^s ₁₄ 16.844 ^s ₄₅	69.40 ^s ₂₈₄ 66.56 ^s ₃₁₀ 63.46 ^s ₃₂₈
Dec.	5.0 15.0 24.9 34.9	11.463 ^s ₁₄₉ 11.612 ^s ₁₉₅ 11.807 ^s ₂₃₄ 12.041 ^s	42.04 ^s ₅₇ 42.61 ^s ₇₁ 43.32 ^s ₈₅ 44.17 ^s	25.071 ^s ₁₁₁ 25.182 ^s ₁₆₂ 25.344 ^s ₂₀₈ 25.552 ^s	26.18 ^s ₃₁₄ 23.04 ^s ₃₁₇ 19.87 ^s ₃₀₈ 16.79 ^s	16.889 ^s ₁₀₄ 16.993 ^s ₁₆₀ 17.153 ^s ₂₁₂ 17.365 ^s	60.18 ^s ₃₄₀ 56.78 ^s ₃₃₉ 53.39 ^s ₃₂₉ 50.10 ^s
Mean Place	10.488	46.82	25.248	22.64	17.376	57.22	
Sec δ, Tan δ	1.049	-0.317	1.176	+0.619	1.288	+0.812	
L α, L δ	+0.01	-0.1	-0.02	-0.1	-0.02	-0.1	
ω α, ω δ	-0.01	-0.9	+0.01	-0.9	+0.02	-0.9	
AUTHORITY	A. N.				A. E.		

APPARENT PLACES OF STARS, 1924. 385

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	α Triang. Aust. Mag. 1·9		ε Scorp.ii. Mag. 2·4		ζ Aræ. Mag. 3·1	
	R. A.	Dec. S.	R. A.	Dec. S.	R. A.	Dec. S.
	^h 16 ^m 40 ^s	[°] 68 ['] 53	^h 16 ^m 45 ^s	[°] 34 ['] 9	^h 16 ^m 52 ^s	[°] 55 ['] 52
Jan. 0·9	32·38 ⁵⁶	7·63 ¹⁶⁸	12·313 ²⁷⁹	11·11 ⁴	16·523 ³⁷⁵	3·25 ¹²²
10·9	32·94 ⁶⁴	5·95 ¹³⁰	12·592 ³¹¹	11·07 ¹⁴	16·898 ⁴²⁴	2·03 ⁹²
20·9	33·58 ⁶⁹	4·65 ⁸⁹	12·903 ³³⁴	11·21 ³⁰	17·322 ⁴⁶³	1·11 ⁶¹
30·8	34·27 ⁷⁴	3·76 ⁴⁸	13·237 ³⁴⁸	11·51 ⁴⁵	17·785 ⁴⁸⁸	0·50 ²⁹
Feb. 9·8	35·01 ⁷⁶	3·28 ⁶	13·585 ³⁵⁴	11·96 ⁵⁷	18·273 ⁵⁰¹	0·21 ²
19·8	35·77 ⁷⁶	3·22 ³⁵	13·939 ³⁵⁴	12·53 ⁶⁵	18·774 ⁵⁰⁶	0·23 ³³
29·8	36·53 ⁷⁵	3·57 ⁷⁵	14·293 ³⁴⁸	13·18 ⁷²	19·280 ⁵⁰⁰	0·56 ⁶¹
Mar. 10·7	37·28 ⁷³	4·32 ¹¹⁰	14·641 ³³⁷	13·90 ⁷⁷	19·780 ⁴⁸⁸	1·17 ⁸⁷
20·7	38·01 ⁶⁹	5·42 ¹⁴⁵	14·978 ³²¹	14·67 ⁸⁰	20·268 ⁴⁶⁷	2·04 ¹¹¹
30·7	38·70 ⁶⁵	6·87 ¹⁷⁴	15·299 ³⁰³	15·47 ⁸²	20·735 ⁴⁴²	3·15 ¹³²
Apr. 9·6	39·35 ⁵⁹	8·61 ²⁰¹	15·602 ²⁸¹	16·29 ⁸⁴	21·177 ⁴⁰⁹	4·47 ¹⁵²
19·6	39·94 ⁵³	10·62 ²²³	15·883 ²⁵⁶	17·13 ⁸⁵	21·586 ³⁷¹	5·99 ¹⁶⁸
29·6	40·47 ⁴⁵	12·85 ²⁴¹	16·139 ²²⁶	17·98 ⁸⁵	21·957 ³²⁸	7·67 ¹⁸²
May 9·6	40·92 ³⁷	15·26 ²⁵⁴	16·365 ¹⁹⁵	18·83 ⁸⁷	22·285 ²⁸⁰	9·49 ¹⁹²
19·5	41·29 ²⁸	17·80 ²⁶²	16·560 ¹⁵⁹	19·70 ⁸⁶	22·565 ²²⁴	11·41 ¹⁹⁸
29·5	41·57 ¹⁸	20·42 ²⁶³	16·719 ¹²⁰	20·56 ⁸⁶	22·789 ¹⁶⁵	13·39 ²⁰¹
June 8·5	41·75 ⁹	23·05 ²⁵⁹	16·839 ⁷⁹	21·42 ⁸³	22·954 ¹⁰²	15·40 ²⁰⁰
18·5	41·84 ²	25·64 ²⁴⁹	16·918 ³⁵	22·25 ⁷⁸	23·056 ³⁷	17·40 ¹⁹³
28·4	41·82 ¹²	28·13 ²³¹	16·953 ⁹	23·03 ⁷⁴	23·093 ³⁰	19·33 ¹⁸¹
July 8·4	41·70 ²¹	30·44 ²⁰⁸	16·944 ⁵³	23·77 ⁶⁵	23·063 ⁹⁴	21·14 ¹⁶⁴
18·4	41·49 ³⁰	32·52 ¹⁷⁷	16·891 ⁹⁵	24·42 ⁵⁴	22·969 ¹⁵⁶	22·78 ¹⁴²
28·3	41·19 ³⁹	34·29 ¹⁴²	16·796 ¹³³	24·96 ⁴⁰	22·813 ²¹¹	24·20 ¹¹⁵
Aug. 7·3	40·80 ⁴⁵	35·71 ¹⁰¹	16·663 ¹⁶⁶	25·36 ²⁶	22·602 ²⁵⁹	25·35 ⁸³
17·3	40·35 ⁴⁹	36·72 ⁵⁶	16·497 ¹⁹⁰	25·62 ⁹	22·343 ²⁹⁶	26·18 ⁵⁰
27·3	39·86 ⁵³	37·28 ⁹	16·307 ²⁰⁷	25·71 ¹⁰	22·047 ³¹⁹	26·68 ¹²
Sept. 6·2	39·33 ⁵³	37·37 ³⁹	16·100 ²¹²	25·61 ²⁷	21·728 ³²⁸	26·80 ²⁶
16·2	38·80 ⁵¹	36·98 ⁸⁶	15·888 ²⁰⁶	25·34 ⁴³	21·400 ³²⁰	26·54 ⁶³
26·2	38·29 ⁴⁷	36·12 ¹³²	15·682 ¹⁸⁹	24·91 ⁵⁹	21·080 ²⁹⁶	25·91 ⁹⁹
Oct. 6·2	37·82 ⁴¹	34·80 ¹⁷¹	15·493 ¹⁶⁰	24·32 ⁷¹	20·784 ²⁵⁶	24·92 ¹³⁰
16·1	37·41 ³¹	33·09 ²⁰⁵	15·333 ¹²⁰	23·61 ⁷⁸	20·528 ²⁰⁰	23·62 ¹⁵⁷
26·1	37·10 ²¹	31·04 ²³⁰	15·213 ⁷²	22·83 ⁸²	20·328 ¹³³	22·05 ¹⁷⁶
Nov. 5·1	36·89 ⁹	28·74 ²⁴⁶	15·141 ¹⁷	22·01 ⁸¹	20·195 ⁵⁵	20·29 ¹⁸⁹
15·0	36·80 ³	26·28 ²⁵³	15·124 ⁴²	21·20 ⁷⁴	20·140 ²⁸	18·40 ¹⁹⁴
25·0	36·83 ¹⁷	23·75 ²⁵⁰	15·166 ¹⁰¹	20·46 ⁶⁴	20·168 ¹¹³	16·46 ¹⁸⁹
Dec. 5·0	37·00 ²⁹	21·25 ²³⁶	15·267 ¹⁵⁸	19·82 ⁴⁹	20·281 ¹⁹⁵	14·57 ¹⁷⁸
15·0	37·29 ⁴⁰	18·89 ²¹⁵	15·425 ²¹¹	19·33 ³¹	20·476 ²⁷²	12·79 ¹⁶⁰
24·9	37·69 ⁵¹	16·74 ¹⁸⁶	15·636 ²⁵⁷	19·02 ¹⁴	20·748 ³⁴¹	11·19 ¹³⁶
34·9	38·20	14·88	15·893	18·88	21·089	9·83
Mean Place	36·05	25·67	14·192	24·66	19·145	19·22
Sec δ, Tan δ	2·777	—2·590	1·208	—0·678	1·782	—1·475
L α, L δ	+0·06	—0·1	+0·02	—0·1	+0·04	—0·1
ω α, ω δ	—0·06	—0·9	—0·01	—0·9	—0·03	—1·0
AUTHORITY	A. E.		A. E.		A. E.	

386 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	κ Ophiuchi. Mag. 3.4		30 Ophiuchi. Mag. 5.0		ε Herculis. Mag. 3.9	
	R. A.	Dec. N.	R. A.	Dec. S.	R. A.	Dec. N.
	^h 16 ^m 54 ^s	[°] 9 ['] 29	^h 16 ^m 57 ^s	[°] 4 ['] 6	^h 16 ^m 57 ^s	[°] 31 ['] 2
Jan. 0.9	2.508 ₂₁₅	37.96 ₂₁₅	1.472 ₂₂₀	26.67 ₁₅₀	21.004 ₂₁₃	18.33 ₂₉₇
10.9	2.723 ₂₄₅	35.81 ₂₀₅	1.692 ₂₅₀	28.17 ₁₄₈	21.217 ₂₅₁	15.36 ₂₇₅
20.9	2.968 ₂₆₇	33.76 ₁₈₇	1.942 ₂₇₁	29.65 ₁₃₉	21.468 ₂₇₉	12.61 ₂₄₄
30.9	3.235 ₂₈₁	31.89 ₁₆₁	2.213 ₂₈₄	31.04 ₁₂₇	21.747 ₃₀₀	10.17 ₂₀₂
Feb. 9.8	3.516 ₂₉₀	30.28 ₁₃₀	2.497 ₂₉₃	32.31 ₁₀₇	22.047 ₃₁₃	8.15 ₁₅₅
19.8	3.806 ₂₉₁	28.98 ₉₄	2.790 ₂₉₃	33.38 ₈₄	22.360 ₃₁₈	6.60 ₁₀₂
29.8	4.097 ₂₈₈	28.04 ₅₄	3.083 ₂₉₀	34.22 ₆₀	22.678 ₃₁₆	5.58 ₄₅
Mar. 10.7	4.385 ₂₇₉	27.50 ₁₅	3.373 ₂₈₂	34.82 ₃₂	22.994 ₃₀₇	5.13 ₁₀
20.7	4.664 ₂₆₇	27.35 ₂₃	3.655 ₂₇₁	35.14 ₆	23.301 ₂₉₄	5.23 ₆₅
30.7	4.931 ₂₅₁	27.58 ₆₀	3.926 ₂₅₆	35.20 ₂₀	23.595 ₂₇₄	5.88 ₁₁₆
Apr. 9.7	5.182 ₂₃₂	28.18 ₉₂	4.182 ₂₃₉	35.00 ₄₂	23.869 ₂₅₁	7.04 ₁₆₀
19.6	5.414 ₂₁₁	29.10 ₁₂₀	4.421 ₂₁₈	34.58 ₆₁	24.120 ₂₂₃	8.64 ₁₉₇
29.6	5.625 ₁₈₆	30.30 ₁₄₀	4.639 ₁₉₆	33.97 ₇₅	24.343 ₁₉₃	10.61 ₂₂₆
May 9.6	5.811 ₁₅₇	31.70 ₁₅₅	4.835 ₁₆₉	33.22 ₈₆	24.536 ₁₅₈	12.87 ₂₄₇
19.6	5.968 ₁₂₈	33.25 ₁₆₄	5.004 ₁₄₀	32.36 ₉₂	24.694 ₁₂₁	15.34 ₂₅₈
29.5	6.096 ₉₅	34.89 ₁₆₇	5.144 ₁₀₈	31.44 ₉₅	24.815 ₈₂	17.92 ₂₆₂
June 8.5	6.191 ₆₁	36.56 ₁₆₅	5.252 ₇₅	30.49 ₉₄	24.897 ₄₂	20.54 ₂₅₇
18.5	6.252 ₂₄	38.21 ₁₅₈	5.327 ₃₈	29.55 ₈₉	24.939 ₀	23.11 ₂₄₅
28.4	6.276 ₁₂	39.79 ₁₄₅	5.365 ₀	28.66 ₈₃	24.939 ₄₁	25.56 ₂₂₆
July 8.4	6.264 ₄₈	41.24 ₁₃₁	5.365 ₃₅	27.83 ₇₄	24.898 ₈₁	27.82 ₂₀₂
18.4	6.216 ₈₃	42.55 ₁₁₃	5.330 ₇₁	27.09 ₆₅	24.817 ₁₁₉	29.84 ₁₇₄
28.4	6.133 ₁₁₅	43.68 ₉₃	5.259 ₁₀₄	26.44 ₅₅	24.698 ₁₅₄	31.58 ₁₄₀
Aug. 7.3	6.018 ₁₄₂	44.61 ₇₁	5.155 ₁₃₂	25.89 ₄₄	24.544 ₁₈₂	32.98 ₁₀₅
17.3	5.876 ₁₆₃	45.32 ₄₈	5.023 ₁₅₅	25.45 ₃₂	24.362 ₂₀₆	34.03 ₆₇
27.3	5.713 ₁₇₈	45.80 ₂₄	4.868 ₁₇₀	25.13 ₂₀	24.156 ₂₂₁	34.70 ₂₆
Sept. 6.3	5.535 ₁₈₄	46.04 ₁	4.698 ₁₇₇	24.93 ₈	23.935 ₂₂₇	34.96 ₁₄
16.2	5.351 ₁₈₁	46.03 ₂₇	4.521 ₁₇₅	24.85 ₅	23.708 ₂₂₅	34.82 ₅₆
26.2	5.170 ₁₆₉	45.76 ₅₃	4.346 ₁₆₂	24.90 ₂₀	23.483 ₂₁₂	34.26 ₉₇
Oct. 6.2	5.001 ₁₄₈	45.23 ₇₉	4.184 ₁₄₁	25.10 ₃₄	23.271 ₁₉₀	33.29 ₁₃₈
16.1	4.853 ₁₁₇	44.44 ₁₀₆	4.043 ₁₀₉	25.44 ₅₀	23.081 ₁₅₇	31.91 ₁₇₇
26.1	4.736 ₇₉	43.38 ₁₃₁	3.934 ₇₂	25.94 ₆₈	22.924 ₁₁₇	30.14 ₂₁₃
Nov. 5.1	4.657 ₃₅	42.07 ₁₅₆	3.862 ₂₇	26.62 ₈₅	22.807 ₇₀	28.01 ₂₄₆
15.1	4.622 ₁₃	40.51 ₁₇₈	3.835 ₂₀	27.47 ₁₀₂	22.737 ₁₈	25.55 ₂₇₄
25.0	4.635 ₆₁	38.73 ₁₉₇	3.855 ₇₁	28.49 ₁₂₀	22.719 ₃₅	22.81 ₂₉₄
Dec. 5.0	4.696 ₁₁₀	36.76 ₂₁₁	3.926 ₁₁₈	29.69 ₁₃₃	22.754 ₉₀	19.87 ₃₀₉
15.0	4.806 ₁₅₅	34.65 ₂₂₀	4.044 ₁₆₂	31.02 ₁₄₅	22.844 ₁₄₁	16.78 ₃₁₄
25.0	4.961 ₁₉₅	32.45 ₂₂₁	4.206 ₂₀₂	32.47 ₁₅₁	22.985 ₁₈₉	13.64 ₃₀₇
34.9	5.156	30.24	4.408	33.98	23.174	10.57
Mean Place	4.184	31.41	3.142	35.27	22.868	14.53
Sec δ, Tan δ	1.014	+0.167	1.003	-0.072	1.167	+0.602
L α, L δ	0.00	-0.1	0.00	-0.1	-0.02	-0.1
ω α, ω δ	0.00	-1.0	0.00	-1.0	+0.01	-1.0
AUTHORITY	A. E.				A. E.	

APPARENT PLACES OF STARS, 1924. 387

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	η Ophiuchi. Mag. 2.6		ζ Draconis. Mag. 3.2		α Herculis. Mag. 3.1-3.9	
	R. A.	Dec. S.	R. A.	Dec. N.	R. A.	Dec. N.
	^h 17 ^m 5	[°] 15 ['] 37	^h 17 ^m 8	[°] 65 ['] 48	^h 17 ^m 11	[°] 14 ['] 28
Jan. 0.9	59.266 ^s 226	45.35 ^s 85	30.43 ^s 27	31.01 ^s 352	9.146 ^s 199	39.05 ^s 236
10.9	59.492 ^s 256	46.20 ^s 89	30.70 ^s 36	27.49 ^s 323	9.345 ^s 231	36.69 ^s 223
20.9	59.748 ^s 279	47.09 ^s 90	31.06 ^s 44	24.26 ^s 281	9.576 ^s 257	34.46 ^s 203
30.9	60.027 ^s 294	47.99 ^s 86	31.50 ^s 51	21.45 ^s 231	9.833 ^s 275	32.43 ^s 175
Feb. 9.8	60.321 ^s 303	48.85 ^s 80	32.01 ^s 55	19.14 ^s 171	10.108 ^s 286	30.68 ^s 140
19.8	60.624 ^s 305	49.65 ^s 68	32.56 ^s 57	17.43 ^s 107	10.394 ^s 292	29.28 ^s 99
29.8	60.929 ^s 303	50.33 ^s 56	33.13 ^s 58	16.36 ^s 38	10.686 ^s 290	28.29 ^s 57
Mar. 10.7	61.232 ^s 297	50.89 ^s 40	33.71 ^s 58	15.98 ^s 29	10.976 ^s 286	27.72 ^s 13
20.7	61.529 ^s 286	51.29 ^s 26	34.29 ^s 55	16.27 ^s 95	11.262 ^s 275	27.59 ^s 31
30.7	61.815 ^s 273	51.55 ^s 11	34.84 ^s 51	17.22 ^s 156	11.537 ^s 262	27.90 ^s 71
Apr. 9.7	62.088 ^s 257	51.66 ^s 2	35.35 ^s 45	18.78 ^s 208	11.799 ^s 244	28.61 ^s 108
19.6	62.345 ^s 237	51.64 ^s 13	35.80 ^s 38	20.86 ^s 254	12.043 ^s 224	29.69 ^s 138
29.6	62.582 ^s 214	51.51 ^s 21	36.18 ^s 31	23.40 ^s 288	12.267 ^s 199	31.07 ^s 163
May 9.6	62.796 ^s 188	51.30 ^s 27	36.49 ^s 23	26.28 ^s 313	12.466 ^s 172	32.70 ^s 181
19.6	62.984 ^s 158	51.03 ^s 30	36.72 ^s 14	29.41 ^s 327	12.638 ^s 142	34.51 ^s 192
29.5	63.142 ^s 125	50.73 ^s 31	36.86 ^s 6	32.68 ^s 330	12.780 ^s 108	36.43 ^s 196
June 8.5	63.267 ^s 91	50.42 ^s 30	36.92 ^s 4	35.98 ^s 324	12.888 ^s 72	38.39 ^s 194
18.5	63.358 ^s 52	50.12 ^s 29	36.88 ^s 13	39.22 ^s 310	12.960 ^s 35	40.33 ^s 185
28.4	63.410 ^s 13	49.83 ^s 25	36.75 ^s 21	42.32 ^s 285	12.995 ^s 3	42.18 ^s 174
July 8.4	63.423 ^s 26	49.58 ^s 22	36.54 ^s 29	45.17 ^s 255	12.992 ^s 41	43.92 ^s 157
18.4	63.397 ^s 64	49.36 ^s 20	36.25 ^s 36	47.72 ^s 218	12.951 ^s 78	45.49 ^s 137
28.4	63.333 ^s 99	49.16 ^s 17	35.89 ^s 42	49.90 ^s 176	12.873 ^s 112	46.86 ^s 114
Aug. 7.3	63.234 ^s 130	48.99 ^s 15	35.47 ^s 47	51.66 ^s 130	12.761 ^s 141	48.00 ^s 88
17.3	63.104 ^s 155	48.84 ^s 13	35.00 ^s 52	52.96 ^s 82	12.620 ^s 165	48.88 ^s 61
27.3	62.949 ^s 173	48.71 ^s 12	34.48 ^s 55	53.78 ^s 30	12.455 ^s 183	49.49 ^s 34
Sept. 6.3	62.776 ^s 181	48.59 ^s 12	33.93 ^s 55	54.08 ^s 23	12.272 ^s 191	49.83 ^s 4
16.2	62.595 ^s 180	48.47 ^s 9	33.38 ^s 55	53.85 ^s 75	12.081 ^s 191	49.87 ^s 26
26.2	62.415 ^s 169	48.38 ^s 7	32.83 ^s 53	53.10 ^s 126	11.890 ^s 181	49.61 ^s 56
Oct. 6.2	62.246 ^s 147	48.31 ^s 3	32.30 ^s 49	51.84 ^s 178	11.709 ^s 162	49.05 ^s 86
16.1	62.099 ^s 117	48.28 ^s 3	31.81 ^s 44	50.06 ^s 225	11.547 ^s 134	48.19 ^s 116
26.1	61.982 ^s 78	48.31 ^s 12	31.37 ^s 38	47.81 ^s 269	11.413 ^s 97	47.03 ^s 146
Nov. 5.1	61.904 ^s 32	48.43 ^s 22	30.99 ^s 29	45.12 ^s 307	11.316 ^s 55	45.57 ^s 172
15.1	61.872 ^s 18	48.65 ^s 33	30.70 ^s 20	42.05 ^s 339	11.261 ^s 8	43.85 ^s 197
25.0	61.890 ^s 69	48.98 ^s 46	30.50 ^s 10	38.66 ^s 361	11.253 ^s 41	41.88 ^s 217
Dec. 5.0	61.959 ^s 118	49.44 ^s 60	30.40 ^s 1	35.05 ^s 375	11.294 ^s 89	39.71 ^s 232
15.0	62.077 ^s 165	50.04 ^s 72	30.41 ^s 11	31.30 ^s 377	11.383 ^s 136	37.39 ^s 240
25.0	62.242 ^s 206	50.76 ^s 81	30.52 ^s 21	27.53 ^s 367	11.519 ^s 178	34.99 ^s 242
34.9	62.448 ^s	51.57 ^s	30.73 ^s	23.86 ^s	11.697 ^s	32.57 ^s
Mean Place	61.015	55.47	33.83	29.16	10.873	32.91
Sec δ , Tan δ	1.038	-0.280	2.440	+2.226	1.033	+0.258
L α , L δ	+0.01	-0.1	-0.06	-0.1	-0.01	-0.1
ω α , ω δ	0.00	-1.0	+0.03	-1.0	0.00	-1.0
AUTHORITY	A. E.		A. E.		A. E.	

388 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	δ Herculis. Mag. 3.2		π Herculis. Mag. 3.4		θ Ophiuchi. Mag. 3.4		
	R. A.	Dec. N.	R. A.	Dec. N.	R. A.	Dec. S.	
	^h 17	^m 11	^h 17	^m 12	^h 17	^m 17	
	^s 24	^s 55	^s 36	^s 53	^s 24	^s 55	
Jan.	0.9	52.734 ¹⁹⁷	45.18 ²⁷⁸	21.960 ²⁰¹	41.98 ³¹⁶	18.518 ^{23c}	19.54 ²⁶
	10.9	52.931 ²³³	42.40 ²⁶¹	22.161 ²⁴²	38.82 ²⁹³	18.748 ²⁶³	19.80 ³⁶
	20.9	53.164 ²⁶²	39.79 ²³⁵	22.403 ²⁷⁷	35.89 ²⁶²	19.011 ²⁸⁹	20.16 ⁴³
	30.9	53.426 ²⁸²	37.44 ¹⁹⁹	22.680 ³⁰⁴	33.27 ²¹⁹	19.300 ³⁰⁷	20.59 ⁴⁸
Feb.	9.8	53.708 ²⁹⁶	35.45 ¹⁵⁶	22.984 ³²⁰	31.08 ¹⁶⁹	19.607 ³¹⁷	21.07 ⁴⁹
	19.8	54.004 ³⁰³	33.89 ¹⁰⁸	23.304 ³³¹	29.39 ¹¹⁴	19.924 ³²³	21.56 ⁴⁸
	29.8	54.307 ³⁰³	32.81 ⁵⁷	23.635 ³³²	28.25 ⁵⁴	20.247 ³²¹	22.04 ⁴⁵
Mar.	10.7	54.610 ²⁹⁸	32.24 ⁴	23.967 ³²⁶	27.71 ⁵	20.568 ³¹⁷	22.49 ⁴⁰
	20.7	54.908 ²⁸⁷	32.20 ⁴⁶	24.293 ³¹⁵	27.76 ⁶⁴	20.885 ³⁰⁸	22.89 ³⁵
	30.7	55.195 ²⁷²	32.66 ⁹⁵	24.608 ²⁹⁶	28.40 ¹¹⁸	21.193 ²⁹⁷	23.24 ³⁰
Apr.	9.7	55.467 ²⁵²	33.61 ¹³⁷	24.904 ²⁷⁴	29.58 ¹⁶⁶	21.490 ²⁸⁰	23.54 ²⁵
	19.6	55.719 ²²⁹	34.98 ¹⁷⁴	25.178 ²⁴⁴	31.24 ²⁰⁸	21.770 ²⁶¹	23.79 ²¹
	29.6	55.948 ²⁰³	36.72 ²⁰²	25.422 ²¹³	33.32 ²⁴⁰	22.031 ²³⁸	24.00 ¹⁹
May	9.6	56.151 ¹⁷¹	38.74 ²²⁴	25.635 ¹⁷⁵	35.72 ²⁶⁴	22.269 ²¹¹	24.19 ¹⁹
	19.6	56.322 ¹³⁸	40.98 ²³⁶	25.810 ¹³⁶	38.36 ²⁷⁹	22.480 ¹⁸⁰	24.38 ¹⁹
	29.5	56.460 ¹⁰²	43.34 ²⁴¹	25.946 ⁹⁴	41.15 ²⁸⁴	22.660 ¹⁴⁵	24.57 ²¹
June	8.5	56.562 ⁶³	45.75 ²³⁹	26.040 ⁵⁰	43.99 ²⁸⁰	22.805 ¹⁰⁸	24.78 ²³
	18.5	56.625 ²⁴	48.14 ²³⁰	26.090 ⁵	46.79 ²⁷⁰	22.913 ⁶⁸	25.01 ²³
	28.4	56.649 ¹⁷	50.44 ²¹⁴	26.095 ⁴¹	49.49 ²⁵¹	22.981 ²⁵	25.24 ²⁵
July	8.4	56.632 ⁵⁷	52.58 ¹⁹³	26.054 ⁸⁵	52.00 ²²⁷	23.006 ¹⁷	25.49 ²⁵
	18.4	56.575 ⁹⁵	54.51 ¹⁶⁸	25.969 ¹²⁶	54.27 ¹⁹⁷	22.989 ⁵⁹	25.74 ²³
	28.4	56.480 ¹³⁰	56.19 ¹³⁹	25.843 ¹⁶⁵	56.24 ¹⁶³	22.930 ⁹⁸	25.97 ²⁰
Aug.	7.3	56.350 ¹⁶⁰	57.58 ¹⁰⁸	25.678 ¹⁹⁷	57.87 ¹²⁵	22.832 ¹³³	26.17 ¹⁵
	17.3	56.190 ¹⁸⁵	58.66 ⁷³	25.481 ²²⁴	59.12 ⁸³	22.699 ¹⁶¹	26.32 ⁹
	27.3	56.005 ²⁰²	59.39 ³⁸	25.257 ²⁴¹	59.95 ⁴¹	22.538 ¹⁸¹	26.41 ¹
Sept.	6.3	55.803 ²¹²	59.77 ⁰	25.016 ²⁵²	60.36 ³	22.357 ¹⁹³	26.42 ⁶
	16.2	55.591 ²¹¹	59.77 ³⁷	24.764 ²⁵⁰	60.33 ⁴⁸	22.164 ¹⁹³	26.36 ¹⁵
	26.2	55.380 ²⁰²	59.40 ⁷⁵	24.514 ²⁴¹	59.85 ⁹³	21.971 ¹⁸³	26.21 ²¹
Oct.	6.2	55.178 ¹⁸¹	58.65 ¹¹³	24.273 ²¹⁹	58.92 ¹³⁷	21.788 ¹⁶²	26.00 ²⁷
	16.1	54.997 ¹⁵³	57.52 ¹⁴⁹	24.054 ¹⁸⁸	57.55 ¹⁷⁹	21.626 ¹³¹	25.73 ³⁰
	26.1	54.844 ¹¹⁶	56.03 ¹⁸³	23.866 ¹⁴⁸	55.76 ²¹⁹	21.495 ⁹⁰	25.43 ³¹
Nov.	5.1	54.728 ⁷¹	54.20 ²¹⁶	23.718 ¹⁰⁰	53.57 ²⁵⁵	21.405 ⁴³	25.12 ²⁷
	15.1	54.657 ²³	52.04 ²⁴³	23.618 ⁴⁸	51.02 ²⁸⁶	21.362 ⁸	24.85 ²¹
	25.0	54.634 ²⁸	49.61 ²⁶⁵	23.570 ⁹	48.16 ³⁰⁹	21.370 ⁶²	24.64 ¹³
Dec.	5.0	54.662 ⁷⁹	46.96 ²⁸¹	23.579 ⁶⁵	45.07 ³²⁵	21.432 ¹¹⁵	24.51 ¹
	15.0	54.741 ¹²⁹	44.15 ²⁸⁸	23.644 ¹²¹	41.82 ³³⁰	21.547 ¹⁶⁴	24.50 ¹⁰
	25.0	54.870 ¹⁷⁴	41.27 ²⁸⁷	23.765 ¹⁷³	38.52 ³²⁷	21.711 ²⁰⁹	24.60 ²¹
	34.9	55.044	38.40	23.938	35.25	21.920	24.81
Mean Place	54.539	40.19	23.936	38.13	20.396	30.48	
Sec δ, Tan δ	1.103	+0.465	1.250	+0.751	1.103	-0.465	
L α, L δ	-0.01	-0.1	-0.02	-0.1	+0.01	-0.1	
ω α, ω δ	+0.01	-1.0	+0.01	-1.0	-0.01	-1.0	
AUTHORITY	A. E.		A. E.		A. E.		

APPARENT PLACES OF STARS, 1924. 389

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	β Aræ. Mag. 2.8		σ Ophiuchi. Mag. 4.4		ν Scorpii. Mag. 2.8	
	R. A.	Dec. S.	R. A.	Dec. N.	R. A.	Dec. S.
	^h 17 ^m 18	[°] 55 ['] 27	^h 17 ^m 22	[°] 4 ['] 12	^h 17 ^m 25	[°] 37 ['] 13
Jan.	0.9 55.887 336	21.08 142	42.865 193	26.57 186	33.409 249	60.35 50
	10.9 56.223 390	19.66 118	43.058 225	24.71 179	33.658 287	59.85 34
	20.9 56.613 432	18.48 91	43.283 250	22.92 165	33.945 319	59.51 19
	30.9 57.045 465	17.57 62	43.533 268	21.27 146	34.264 340	59.32 4
Feb.	9.8 57.510 485	16.95 32	43.801 280	19.81 121	34.604 354	59.28 8
	19.8 57.995 496	16.63 4	44.081 285	18.60 90	34.958 362	59.36 19
	29.8 58.491 498	16.59 24	44.366 287	17.70 56	35.320 363	59.55 29
Mar.	10.8 58.989 493	16.83 49	44.653 283	17.14 21	35.683 359	59.84 38
	20.7 59.482 479	17.32 75	44.936 275	16.93 13	36.042 352	60.22 44
	30.7 59.961 459	18.07 99	45.211 265	17.06 46	36.394 338	60.66 52
Apr.	9.7 60.420 434	19.06 119	45.476 250	17.52 76	36.732 322	61.18 59
	19.6 60.854 401	20.25 139	45.726 232	18.28 100	37.054 301	61.77 65
	29.6 61.255 362	21.64 155	45.958 210	19.28 121	37.355 277	62.42 71
May	9.6 61.617 316	23.19 171	46.168 186	20.49 134	37.632 246	63.13 79
	19.6 61.933 265	24.90 181	46.354 158	21.83 144	37.878 211	63.92 84
	29.5 62.198 208	26.71 190	46.512 125	23.27 147	38.089 172	64.76 89
June	8.5 62.406 146	28.61 193	46.637 91	24.74 146	38.261 129	65.65 92
	18.5 62.552 80	30.54 192	46.728 55	26.20 140	38.390 82	66.57 94
	28.5 62.632 14	32.46 185	46.783 17	27.60 131	38.472 34	67.51 92
July	8.4 62.646 54	34.31 174	46.800 22	28.91 118	38.506 16	68.43 89
	18.4 62.592 120	36.05 156	46.778 59	30.09 103	38.490 63	69.32 82
	28.4 62.472 181	37.61 135	46.719 94	31.12 87	38.427 109	70.14 70
Aug.	7.3 62.291 233	38.96 107	46.625 126	31.99 69	38.318 150	70.84 58
	17.3 62.058 277	40.03 75	46.499 151	32.68 50	38.168 183	71.42 41
	27.3 61.781 307	40.78 41	46.348 171	33.18 29	37.985 207	71.83 23
Sept.	6.3 61.474 325	41.19 4	46.177 180	33.47 10	37.778 222	72.06 3
	16.2 61.149 325	41.23 34	45.997 183	33.57 11	37.556 224	72.09 18
	26.2 60.824 309	40.89 71	45.814 174	33.46 33	37.332 214	71.91 38
Oct.	6.2 60.515 276	40.18 104	45.640 157	33.13 55	37.118 189	71.53 56
	16.2 60.239 228	39.14 135	45.483 130	32.58 76	36.929 159	70.97 71
	26.1 60.011 166	37.79 159	45.353 95	31.82 100	36.770 113	70.26 82
Nov.	5.1 59.845 94	36.20 176	45.258 54	30.82 121	36.657 60	69.44 89
	15.1 59.751 15	34.44 187	45.204 9	29.61 141	36.597 3	68.55 91
	25.0 59.736 69	32.57 190	45.195 39	28.20 159	36.594 58	67.64 87
Dec.	5.0 59.805 150	30.67 184	45.234 87	26.61 174	36.652 117	66.77 81
	15.0 59.955 228	28.83 171	45.321 132	24.87 184	36.769 173	65.96 69
	25.0 60.183 299	27.12 155	45.453 173	23.03 189	36.942 222	65.27 57
	34.9 60.482	25.57	45.626	21.14	37.164	64.70
Mean Place	58.699	35.13	44.584	19.14	35.538	72.24
Sec δ , Tan δ	1.764	-1.453	1.003	+0.074	1.256	-0.760
L α , L δ	+0.04	-0.1	0.00	-0.1	+0.02	-0.1
ω α , ω δ	-0.02	-1.0	0.00	-1.0	-0.01	-1.0
AUTHORITY	A. E.				A. N.	

390 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	α Aræ. Mag. 3.0		λ Scorpïi. Mag. 1.7		β Draconis. Mag. 3.0	
	R. A.	Dec. S.	R. A.	Dec. S.	R. A.	Dec. N.
	^h 17	^m 25	^h 17	^m 28	^h 17	^m 28
	^s	[°]	^s	[°]	^s	[°]
Jan.	0.9	55.251 ²⁹⁴	50.68 ¹¹⁹	24.590 ²⁴⁶	47.50 ⁵¹	40.444 ¹⁹⁴
	10.9	55.545 ³⁴²	49.49 ⁹⁸	24.836 ²⁸⁵	46.99 ³⁵	40.638 ²⁵⁵
	20.9	55.887 ³⁸¹	48.51 ⁷⁵	25.121 ³¹⁵	46.64 ²¹	40.893 ³⁰⁶
	30.9	56.268 ⁴¹⁰	47.76 ⁵¹	25.436 ³³⁸	46.43 ⁷	41.199 ³⁴⁸
Feb.	9.8	56.678 ⁴²⁸	47.25 ²⁷	25.774 ³⁵³	46.36 ⁶	41.547 ³⁷⁹
	19.8	57.106 ⁴³⁹	46.98 ⁴	26.127 ³⁶¹	46.42 ¹⁷	41.926 ⁴⁰⁰
	29.8	57.545 ⁴⁴²	46.94 ¹⁹	26.488 ³⁶²	46.59 ²⁶	42.326 ⁴¹⁰
Mar.	10.8	57.987 ⁴³⁸	47.13 ³⁹	26.850 ³⁶⁰	46.85 ³⁴	42.736 ⁴⁰⁸
	20.7	58.425 ⁴²⁸	47.52 ⁶⁰	27.210 ³⁵²	47.19 ⁴²	43.144 ³⁹⁷
	30.7	58.853 ⁴¹²	48.12 ⁷⁸	27.562 ³⁴⁰	47.61 ⁴⁹	43.541 ³⁷⁵
Apr.	9.7	59.265 ³⁹¹	48.90 ⁹⁶	27.902 ³²³	48.10 ⁵⁵	43.916 ³⁴⁶
	19.6	59.656 ³⁶⁴	49.86 ¹¹³	28.225 ³⁰³	48.65 ⁶²	44.262 ³⁰⁹
	29.6	60.020 ³³²	50.99 ¹²⁶	28.528 ²⁷⁸	49.27 ⁶⁹	44.571 ²⁶⁵
May	9.6	60.352 ²⁹³	52.25 ¹⁴⁰	28.806 ²⁴⁹	49.96 ⁷⁵	44.836 ²¹⁵
	19.6	60.645 ²⁵⁰	53.65 ¹⁵⁰	29.055 ²¹⁴	50.71 ⁸²	45.051 ¹⁶²
	29.5	60.895 ²⁰⁰	55.15 ¹⁵⁸	29.269 ¹⁷⁴	51.53 ⁸⁷	45.213 ¹⁰⁴
June	8.5	61.095 ¹⁴⁷	56.73 ¹⁶²	29.443 ¹³²	52.40 ⁹⁰	45.317 ⁴⁵
	18.5	61.242 ⁸⁸	58.35 ¹⁶³	29.575 ⁸⁵	53.30 ⁹²	45.362 ¹⁵
	28.5	61.330 ²⁹	59.98 ¹⁵⁸	29.660 ³⁸	54.22 ⁹²	45.347 ⁷⁶
July	8.4	61.359 ³¹	61.56 ¹⁵⁰	29.698 ¹³	55.14 ⁸⁸	45.271 ¹³²
	18.4	61.328 ⁸⁹	63.06 ¹³⁷	29.685 ⁶¹	56.02 ⁸¹	45.139 ¹⁸⁷
	28.4	61.239 ¹⁴⁵	64.43 ¹¹⁹	29.624 ¹⁰⁶	56.83 ⁷¹	44.952 ²³⁶
Aug.	7.3	61.094 ¹⁹⁴	65.62 ⁹⁷	29.518 ¹⁴⁷	57.54 ⁵⁸	44.716 ²⁷⁹
	17.3	60.900 ²³⁴	66.59 ⁷⁰	29.371 ¹⁸⁰	58.12 ⁴³	44.437 ³¹³
	27.3	60.666 ²⁶³	67.29 ⁴¹	29.191 ²⁰⁶	58.55 ²⁵	44.124 ³³⁸
Sept.	6.3	60.403 ²⁸⁰	67.70 ⁹	28.985 ²²¹	58.80 ⁴	43.786 ³⁵²
	16.2	60.123 ²⁸³	67.79 ²⁴	28.764 ²²³	58.84 ¹⁶	43.434 ³⁵⁵
	26.2	59.840 ²⁷⁰	67.55 ⁵⁵	28.541 ²¹⁵	58.68 ³⁵	43.079 ³⁴⁵
Oct.	6.2	59.570 ²⁴³	67.00 ⁸⁶	28.326 ¹⁹²	58.33 ⁵³	42.734 ³²⁴
	16.2	59.327 ²⁰³	66.14 ¹¹²	28.134 ¹⁵⁹	57.80 ⁶⁸	42.410 ²⁹⁰
	26.1	59.124 ¹⁴⁸	65.02 ¹³³	27.975 ¹¹⁵	57.12 ⁸⁰	42.120 ²⁴⁴
Nov.	5.1	58.976 ⁸⁵	63.69 ¹⁴⁸	27.860 ⁶³	56.32 ⁸⁷	41.876 ¹⁸⁹
	15.1	58.891 ¹⁵	62.21 ¹⁵⁸	27.797 ⁶	55.45 ⁹⁰	41.687 ¹²⁶
	25.0	58.876 ⁵⁸	60.63 ¹⁵⁹	27.791 ⁵⁴	54.55 ⁸⁷	41.561 ⁵⁸
Dec.	5.0	58.934 ¹³⁰	59.04 ¹⁵⁴	27.845 ¹¹³	53.68 ⁸⁰	41.503 ¹³
	15.0	59.064 ¹⁹⁸	57.50 ¹⁴⁴	27.958 ¹⁷⁰	52.88 ⁶⁹	41.516 ⁸⁶
	25.0	59.262 ²⁶³	56.06 ¹²⁹	28.128 ²²⁰	52.19 ⁵⁷	41.602 ¹⁵⁴
	34.9	59.525	54.77	28.348	51.62	41.756
Mean Place	57.809	63.72	26.732	59.20	42.874	25.38
Sec δ, Tan δ	1.550	-1.184	1.253	-0.755	1.637	+1.297
L α, L δ	+0.03	-0.1	+0.02	-0.1	-0.03	-0.1
ω α, ω δ	-0.01	-1.0	-0.01	-1.0	+0.01	-1.0
AUTHORITY	A. E.		A. E.		A. E.	

APPARENT PLACES OF STARS, 1924. 391

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	α Ophiuchi. Mag. 2.1		θ Scorpii. Mag. 2.0		κ Scorpii. Mag. 2.5	
	R. A.	Dec. N.	R. A.	Dec. S.	R. A.	Dec. S.
	^h 17 31 _s	^m 12 36 _s	^h 17 31 _s	^m 42 56 _s	^h 17 37 _s	^m 38 59 _s
Jan. 0.9	22.599 ₁₈₁	57.55 ₂₂₅	48.911 ₂₆₁	51.73 ₈₆	11.435 ₂₄₁	20.89 ₆₇
10.9	22.780 ₂₁₅	55.30 ₂₁₆	49.172 ₃₀₃	50.87 ₆₉	11.676 ₂₈₃	20.22 ₅₂
20.9	22.995 ₂₄₃	53.14 ₁₉₈	49.475 ₃₃₇	50.18 ₅₁	11.959 ₃₁₅	19.70 ₃₇
30.9	23.238 ₂₆₃	51.16 ₁₇₂	49.812 ₃₆₂	49.67 ₃₃	12.274 ₃₃₉	19.33 ₂₂
Feb. 9.8	23.501 ₂₇₇	49.44 ₁₄₀	50.174 ₃₈₀	49.34 ₁₅	12.613 ₃₅₆	19.11 ₉
19.8	23.778 ₂₈₄	48.04 ₁₀₂	50.554 ₃₈₉	49.19 ₂	12.969 ₃₆₆	19.02 ₃
29.8	24.062 ₂₈₉	47.02 ₆₂	50.943 ₃₉₃	49.21 ₁₇	13.335 ₃₇₀	19.05 ₁₅
Mar. 10.8	24.351 ₂₈₇	46.40 ₁₉	51.336 ₃₉₀	49.38 ₃₁	13.705 ₃₆₉	19.20 ₂₅
20.7	24.638 ₂₈₀	46.21 ₂₃	51.726 ₃₈₃	49.69 ₄₅	14.074 ₃₆₂	19.45 ₃₄
30.7	24.918 ₂₆₉	46.44 ₆₃	52.109 ₃₇₀	50.14 ₅₈	14.436 ₃₅₃	19.79 ₄₄
Apr. 9.7	25.187 ₂₅₅	47.07 ₉₉	52.479 ₃₅₃	50.72 ₆₉	14.789 ₃₃₆	20.23 ₅₂
19.6	25.442 ₂₃₇	48.06 ₁₃₀	52.832 ₃₃₁	51.41 ₈₁	15.125 ₃₁₇	20.75 ₆₁
29.6	25.679 ₂₁₆	49.36 ₁₅₅	53.163 ₃₀₃	52.22 ₉₂	15.442 ₂₉₃	21.36 ₇₁
May 9.6	25.895 ₁₉₀	50.91 ₁₇₄	53.466 ₂₇₁	53.14 ₁₀₃	15.735 ₂₆₃	22.07 ₇₈
19.6	26.085 ₁₆₀	52.65 ₁₈₅	53.737 ₂₃₃	54.17 ₁₁₁	15.998 ₂₂₈	22.85 ₈₇
29.5	26.245 ₁₂₈	54.50 ₁₉₁	53.970 ₁₉₁	55.28 ₁₁₈	16.226 ₁₈₉	23.72 ₉₄
June 8.5	26.373 ₉₃	56.41 ₁₉₀	54.161 ₁₄₃	56.46 ₁₂₃	16.415 ₁₄₅	24.66 ₉₉
18.5	26.466 ₅₅	58.31 ₁₈₄	54.304 ₉₃	57.69 ₁₂₄	16.560 ₉₇	25.65 ₁₀₂
28.5	26.521 ₁₆	60.15 ₁₇₃	54.397 ₄₀	58.93 ₁₂₄	16.657 ₄₆	26.67 ₁₀₂
July 8.4	26.537 ₂₃	61.88 ₁₅₇	54.437 ₁₄	60.17 ₁₁₈	16.703 ₄	27.69 ₁₀₀
18.4	26.514 ₆₁	63.45 ₁₃₈	54.423 ₆₈	61.35 ₁₀₉	16.699 ₅₅	28.69 ₉₇
28.4	26.453 ₉₈	64.83 ₁₁₇	54.355 ₁₁₆	62.44 ₉₆	16.644 ₁₀₂	29.66 ₇₉
Aug. 7.3	26.355 ₁₂₉	66.00 ₉₃	54.239 ₁₆₁	63.40 ₇₉	16.542 ₁₄₆	30.45 ₇₀
17.3	26.226 ₁₅₆	66.93 ₆₈	54.078 ₁₉₉	64.19 ₅₉	16.396 ₁₈₂	31.15 ₅₄
27.3	26.070 ₁₇₇	67.61 ₄₁	53.879 ₂₂₅	64.78 ₃₆	16.214 ₂₁₀	31.69 ₃₄
Sept. 6.3	25.893 ₁₈₈	68.02 ₁₃	53.654 ₂₄₃	65.14 ₁₁	16.004 ₂₂₆	32.03 ₁₂
16.2	25.705 ₁₉₁	68.15 ₁₅	53.411 ₂₄₆	65.25 ₁₆	15.778 ₂₃₁	32.15 ₉
26.2	25.514 ₁₈₅	68.00 ₄₄	53.165 ₂₃₇	65.09 ₄₁	15.547 ₂₂₄	32.06 ₃₂
Oct. 6.2	25.329 ₁₆₉	67.56 ₇₃	52.928 ₂₁₄	64.68 ₆₅	15.323 ₂₀₃	31.74 ₅₂
16.2	25.160 ₁₄₃	66.83 ₁₀₁	52.714 ₁₇₈	64.03 ₈₆	15.120 ₁₆₉	31.22 ₆₉
26.1	25.017 ₁₁₀	65.82 ₁₃₀	52.536 ₁₃₂	63.17 ₁₀₂	14.951 ₁₂₇	30.53 ₈₄
Nov. 5.1	24.907 ₆₉	64.52 ₁₅₆	52.404 ₇₆	62.15 ₁₁₅	14.824 ₇₅	29.69 ₉₄
15.1	24.838 ₂₄	62.96 ₁₈₁	52.328 ₁₄	61.00 ₁₂₀	14.749 ₁₆	28.75 ₉₉
25.0	24.814 ₂₃	61.15 ₂₀₁	52.314 ₅₀	59.80 ₁₂₁	14.733 ₄₄	27.76 ₉₈
Dec. 5.0	24.837 ₇₁	59.14 ₂₁₇	52.364 ₁₁₅	58.59 ₁₁₆	14.777 ₁₀₄	26.78 ₉₃
15.0	24.908 ₁₁₇	56.97 ₂₂₇	52.479 ₁₇₆	57.43 ₁₀₇	14.881 ₁₆₃	25.85 ₈₅
25.0	25.025 ₁₆₀	54.70 ₂₃₀	52.655 ₂₃₁	56.36 ₉₄	15.044 ₂₁₄	25.00 ₇₃
34.9	25.185	52.40	52.886	55.42	15.258	24.27
Mean Place	24.345	50.93	51.236	63.77	13.658	32.25
Sec δ , Tan δ	1.025	+0.224	1.366	-0.931	1.287	-0.810
L α , L δ	-0.01	-0.1	+0.02	-0.1	+0.02	0.0
ω α , ω δ	0.00	-1.0	-0.01	-1.0	-0.01	-1.0
AUTHORITY	A. E.		A. E.		A. N.	

392 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	η Pavonis. Mag. 3.6		β Ophiuchi. Mag. 2.9		ϵ^1 Scorpii. Mag. 3.1	
	R. A.	Dec. S.	R. A.	Dec. N.	R. A.	Dec. S.
	^h 17 ^m 38	[°] 64 ['] 41	^h 17 ^m 39	[°] 4 ['] 35	^h 17 ^m 42	[°] 40 ['] 5
Jan. 1.0	12.31 ₃₈	9.94 ₂₀₂	41.309 ₁₇₈	59.77 ₁₈₃	13.722 ₂₃₉	45.29 ₇₇
10.9	12.69 ₄₆	7.92 ₁₇₇	41.487 ₂₁₁	57.94 ₁₇₇	13.961 ₂₈₁	44.52 ₆₂
20.9	13.15 ₅₂	6.15 ₁₄₉	41.698 ₂₃₈	56.17 ₁₆₄	14.242 ₃₁₄	43.90 ₄₇
30.9	13.67 ₅₈	4.66 ₁₁₆	41.936 ₂₅₇	54.53 ₁₄₅	14.556 ₃₄₁	43.43 ₃₁
Feb. 9.8	14.25 ₆₁	3.50 ₈₂	42.193 ₂₇₂	53.08 ₁₂₀	14.897 ₃₅₉	43.12 ₁₈
19.8	14.86 ₆₃	2.68 ₄₇	42.465 ₂₈₂	51.88 ₈₉	15.256 ₃₇₀	42.94 ₅
29.8	15.49 ₆₅	2.21 ₁₂	42.747 ₂₈₄	50.99 ₅₆	15.626 ₃₇₄	42.89 ₈
Mar. 10.8	16.14 ₆₄	2.09 ₂₃	43.031 ₂₈₄	50.43 ₂₀	16.000 ₃₇₅	42.97 ₁₉
20.7	16.78 ₆₄	2.32 ₅₅	43.315 ₂₈₀	50.23 ₁₄	16.375 ₃₆₉	43.16 ₃₀
30.7	17.42 ₆₁	2.87 ₈₇	43.595 ₂₇₀	50.37 ₄₈	16.744 ₃₆₀	43.46 ₄₁
Apr. 9.7	18.03 ₅₈	3.74 ₁₁₇	43.865 ₂₅₉	50.85 ₇₈	17.104 ₃₄₄	43.87 ₅₀
19.7	18.61 ₅₅	4.91 ₁₄₅	44.124 ₂₄₃	51.63 ₁₀₄	17.448 ₃₂₆	44.37 ₆₁
29.6	19.16 ₅₀	6.36 ₁₇₀	44.367 ₂₂₂	52.67 ₁₂₅	17.774 ₃₀₁	44.98 ₇₀
May 9.6	19.66 ₄₃	8.06 ₁₉₂	44.589 ₁₉₉	53.92 ₁₄₀	18.075 ₂₇₂	45.68 ₈₁
19.6	20.09 ₃₇	9.98 ₂₁₀	44.788 ₁₇₂	55.32 ₁₅₀	18.347 ₂₃₇	46.49 ₈₉
29.5	20.46 ₂₉	12.08 ₂₂₃	44.960 ₁₄₀	56.82 ₁₅₄	18.584 ₁₉₆	47.38 ₉₈
June 8.5	20.75 ₂₁	14.31 ₂₃₁	45.100 ₁₀₆	58.36 ₁₅₃	18.780 ₁₅₃	48.36 ₁₀₃
18.5	20.96 ₁₃	16.62 ₂₃₄	45.206 ₇₀	59.89 ₁₄₇	18.933 ₁₀₄	49.39 ₁₀₇
28.5	21.09 ₃	18.96 ₂₃₀	45.276 ₃₀	61.36 ₁₃₉	19.037 ₅₂	50.46 ₁₀₉
July 8.4	21.12 ₆	21.26 ₂₂₀	45.306 ₉	62.75 ₁₂₆	19.089 ₁	51.55 ₁₀₆
18.4	21.06 ₁₄	23.46 ₂₀₃	45.297 ₄₈	64.01 ₁₁₀	19.090 ₅₁	52.61 ₁₀₀
28.4	20.92 ₂₃	25.49 ₁₇₉	45.249 ₈₄	65.11 ₉₄	19.039 ₁₀₁	53.61 ₉₀
Aug. 7.4	20.69 ₃₀	27.28 ₁₅₁	45.165 ₁₁₇	66.05 ₇₅	18.938 ₁₄₅	54.51 ₇₆
17.3	20.39 ₃₇	28.79 ₁₁₅	45.048 ₁₄₆	66.80 ₅₆	18.793 ₁₈₃	55.27 ₆₀
27.3	20.02 ₄₁	29.94 ₇₄	44.902 ₁₆₇	67.36 ₃₅	18.610 ₂₁₁	55.87 ₄₀
Sept. 6.3	19.61 ₄₄	30.68 ₃₁	44.735 ₁₈₀	67.71 ₁₄	18.399 ₂₂₉	56.27 ₁₇
16.2	19.17 ₄₅	30.99 ₁₄	44.555 ₁₈₄	67.85 ₇	18.170 ₂₃₅	56.44 ₆
26.2	18.72 ₄₃	30.85 ₅₉	44.371 ₁₈₀	67.78 ₂₉	17.935 ₂₃₀	56.38 ₂₉
Oct. 6.2	18.29 ₄₀	30.26 ₁₀₂	44.191 ₁₆₃	67.49 ₅₁	17.705 ₂₀₉	56.09 ₅₀
16.2	17.89 ₃₄	29.24 ₁₄₂	44.028 ₁₄₀	66.98 ₇₃	17.496 ₁₇₅	55.59 ₇₀
26.1	17.55 ₂₇	27.82 ₁₇₆	43.888 ₁₀₈	66.25 ₉₅	17.321 ₁₃₅	54.89 ₈₆
Nov. 5.1	17.28 ₁₈	26.06 ₂₀₃	43.780 ₆₈	65.30 ₁₁₈	17.186 ₈₁	54.03 ₉₇
15.1	17.10 ₈	24.03 ₂₂₂	43.712 ₂₃	64.12 ₁₃₇	17.105 ₂₄	53.06 ₁₀₄
25.1	17.02 ₂	21.81 ₂₃₂	43.689 ₂₂	62.75 ₁₅₆	17.081 ₃₈	52.02 ₁₀₄
Dec. 5.0	17.04 ₁₃	19.49 ₂₃₄	43.711 ₇₀	61.19 ₁₇₁	17.119 ₉₉	50.98 ₁₀₁
15.0	17.17 ₂₄	17.15 ₂₂₇	43.781 ₁₁₅	59.48 ₁₈₁	17.218 ₁₅₈	49.97 ₉₃
25.0	17.41 ₃₃	14.88 ₂₁₂	43.896 ₁₅₆	57.67 ₁₈₅	17.376 ₂₁₂	49.04 ₈₂
34.9	17.74	12.76	44.052	55.82	17.588	48.22
Mean Place	16.096	23.11	43.054	52.40	15.997	56.41
Sec δ , Tan δ	2.339	-2.115	1.003	+0.080	1.307	-0.842
L α , L δ	+0.05	0.0	0.00	0.0	+0.02	0.0
ω α , ω δ	-0.01	-1.0	0.00	-1.0	0.00	-1.0
AUTHORITY	A. E.		A. E.		A. N.	

APPARENT PLACES OF STARS, 1924. 393

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	μ Herculis. Mag. 3.5		89 Herculis. Mag. 5.5		γ Draconis. Mag. 2.4	
	R. A.	Dec. N.	R. A.	Dec. N.	R. A.	Dec. N.
	^h 17 ^m 43	[°] 27 ['] 45	^h 17 ^m 52	[°] 26 ['] 3	^h 17 ^m 54	[°] 51 ['] 29
Jan. 1.0	27.150 ₁₆₄	56.72 ₂₉₀	19.420 ₁₅₆	46.12 ₂₈₁	48.101 ₁₅₄	55.26 ₃₅₂
10.9	27.314 ₂₀₄	53.82 ₂₇₆	19.576 ₁₉₅	43.31 ₂₆₉	48.255 ₂₁₄	51.74 ₃₃₄
20.9	27.518 ₂₃₇	51.06 ₂₅₂	19.771 ₂₃₀	40.62 ₂₄₆	48.469 ₂₆₉	48.40 ₃₀₆
30.9	27.755 ₂₆₄	48.54 ₂₁₈	20.001 ₂₅₆	38.16 ₂₁₅	48.738 ₃₁₅	45.34 ₂₆₅
Feb. 9.9	28.019 ₂₈₄	46.36 ₁₇₆	20.257 ₂₇₆	36.01 ₁₇₄	49.053 ₃₅₁	42.69 ₂₁₅
19.8	28.303 ₂₉₆	44.60 ₁₂₉	20.533 ₂₉₀	34.27 ₁₂₉	49.404 ₃₇₉	40.54 ₁₅₈
29.8	28.599 ₃₀₄	43.31 ₇₆	20.823 ₂₉₉	32.98 ₇₇	49.783 ₃₉₅	38.96 ₉₅
Mar. 10.8	28.903 ₃₀₄	42.55 ₂₂	21.122 ₃₀₁	32.21 ₂₅	50.178 ₄₀₁	38.01 ₂₉
20.7	29.207 ₂₉₉	42.33 ₃₂	21.423 ₂₉₈	31.96 ₂₈	50.579 ₃₉₇	37.72 ₃₆
30.7	29.506 ₂₉₀	42.65 ₈₃	21.721 ₂₉₀	32.24 ₇₉	50.976 ₃₈₃	38.08 ₉₉
Apr. 9.7	29.796 ₂₇₃	43.48 ₁₃₀	22.011 ₂₇₇	33.03 ₁₂₅	51.359 ₃₆₁	39.07 ₁₅₆
19.7	30.069 ₂₅₄	44.78 ₁₇₀	22.288 ₂₅₈	34.28 ₁₆₅	51.720 ₃₃₀	40.63 ₂₀₇
29.6	30.323 ₂₃₀	46.48 ₂₀₄	22.546 ₂₃₆	35.93 ₁₉₉	52.050 ₂₉₃	42.70 ₂₄₉
May 9.6	30.553 ₂₀₀	48.52 ₂₃₀	22.782 ₂₀₈	37.92 ₂₂₅	52.343 ₂₄₇	45.19 ₂₈₃
19.6	30.753 ₁₆₈	50.82 ₂₄₆	22.990 ₁₇₇	40.17 ₂₄₃	52.590 ₁₉₆	48.02 ₃₀₆
29.6	30.921 ₁₃₁	53.28 ₂₅₆	23.167 ₁₄₂	42.60 ₂₅₂	52.786 ₁₄₂	51.08 ₃₂₀
June 8.5	31.052 ₉₂	55.84 ₂₅₇	23.309 ₁₀₂	45.12 ₂₅₄	52.928 ₈₄	54.28 ₃₂₅
18.5	31.144 ₅₀	58.41 ₂₅₁	23.411 ₆₂	47.66 ₂₅₀	53.012 ₂₄	57.53 ₃₂₀
28.5	31.194 ₆	60.92 ₂₃₇	23.473 ₁₈	50.16 ₂₃₇	53.036 ₃₇	60.73 ₃₀₅
July 8.4	31.200 ₃₆	63.29 ₂₁₉	23.491 ₂₄	52.53 ₂₁₉	52.999 ₉₆	63.78 ₂₈₅
18.4	31.164 ₇₈	65.48 ₁₉₅	23.467 ₆₇	54.72 ₁₉₇	52.903 ₁₅₂	66.63 ₂₅₇
28.4	31.086 ₁₁₈	67.43 ₁₆₆	23.400 ₁₀₇	56.69 ₁₇₀	52.751 ₂₀₆	69.20 ₂₂₄
Aug. 7.4	30.968 ₁₅₂	69.09 ₁₃₄	23.293 ₁₄₃	58.39 ₁₃₉	52.545 ₂₅₁	71.44 ₁₈₃
17.3	30.816 ₁₈₂	70.43 ₁₀₀	23.150 ₁₇₃	59.78 ₁₀₅	52.294 ₂₉₁	73.27 ₁₄₁
27.3	30.634 ₂₀₅	71.43 ₆₃	22.977 ₁₉₇	60.83 ₇₁	52.003 ₃₂₂	74.68 ₉₅
Sept. 6.3	30.429 ₂₁₉	72.06 ₂₄	22.780 ₂₁₃	61.54 ₃₃	51.681 ₃₄₁	75.63 ₄₆
16.3	30.210 ₂₂₄	72.30 ₁₅	22.567 ₂₁₉	61.87 ₆	51.340 ₃₅₁	76.09 ₄
26.2	29.986 ₂₁₉	72.15 ₅₆	22.348 ₂₁₇	61.81 ₄₄	50.989 ₃₄₇	76.05 ₅₆
Oct. 6.2	29.767 ₂₀₅	71.59 ₉₅	22.131 ₂₀₂	61.37 ₈₄	50.642 ₃₃₁	75.49 ₁₀₇
16.2	29.562 ₁₈₀	70.64 ₁₃₄	21.929 ₁₈₀	60.53 ₁₂₂	50.311 ₃₀₃	74.42 ₁₅₇
26.1	29.382 ₁₄₇	69.30 ₁₇₃	21.749 ₁₄₇	59.31 ₁₅₈	50.008 ₂₆₄	72.85 ₂₀₄
Nov. 5.1	29.235 ₁₀₅	67.57 ₂₀₇	21.602 ₁₀₉	57.73 ₁₉₄	49.744 ₂₁₅	70.81 ₂₄₉
15.1	29.130 ₆₀	65.50 ₂₃₈	21.493 ₆₄	55.79 ₂₂₅	49.529 ₁₅₆	68.32 ₂₈₇
25.1	29.070 ₁₀	63.12 ₂₆₁	21.429 ₁₅	53.54 ₂₅₀	49.373 ₉₃	65.45 ₃₁₉
Dec. 5.0	29.060 ₄₁	60.48 ₂₈₃	21.414 ₃₅	51.04 ₂₇₁	49.280 ₂₄	62.26 ₃₄₃
15.0	29.101 ₉₁	57.65 ₂₉₅	21.449 ₈₄	48.33 ₂₈₃	49.256 ₄₅	58.83 ₃₅₇
25.0	29.192 ₁₃₉	54.70 ₂₉₆	21.533 ₁₃₁	45.50 ₂₈₆	49.301 ₁₁₃	55.26 ₃₅₉
35.0	29.331	51.74	21.664	42.64	49.414	51.67
Mean Place	29.003	50.99	21.256	40.03	50.466	49.98
Sec δ , Tan δ	1.130	+0.526	1.113	+0.489	1.606	+1.257
L α , L δ	-0.01	0.0	-0.01	0.0	-0.03	0.0
ω α , ω δ	0.00	-1.0	0.00	-1.0	0.00	-1.0
AUTHORITY	A. E.				A. E.	

394 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	ν Ophiuchi. Mag. 3.5		γ Sagittarii. Mag. 3.1		72 Ophiuchi. Mag. 3.7	
	R. A.	Dec. S.	R. A.	Dec. S.	R. A.	Dec. N.
	^h 17 ^m 54	[°] 9 ['] 45	^h 18 ^m 0	[°] 30 ['] 25	^h 18 ^m 3	[°] 9 ['] 33
Jan. 1.0	48.688 ¹⁷⁶	47.79 ⁹⁸	53.345 ¹⁹⁷	26.22 ²⁹	42.987 ¹⁵²	14.26 ²⁰³
10.9	48.864 ²⁰⁹	48.77 ⁹⁹	53.542 ²³⁶	25.93 ²¹	43.139 ¹⁸⁷	12.23 ¹⁹⁷
20.9	49.073 ²³⁷	49.76 ⁹⁵	53.778 ²⁶⁸	25.72 ¹⁴	43.326 ²¹⁷	10.26 ¹⁸³
30.9	49.310 ²⁵⁹	50.71 ⁸⁶	54.046 ²⁹²	25.58 ⁷	43.543 ²⁴¹	8.43 ¹⁶²
Feb. 9.9	49.569 ²⁷⁴	51.57 ⁷³	54.338 ³¹²	25.51 ³	43.784 ²⁶⁰	6.81 ¹³³
19.8	49.843 ²⁸⁵	52.30 ⁵⁶	54.650 ³²⁴	25.48 ⁰	44.044 ²⁷²	5.48 ¹⁰⁰
29.8	50.128 ²⁹⁰	52.86 ³⁸	54.974 ³³¹	25.48 ³	44.316 ²⁸⁰	4.48 ⁶²
Mar. 10.8	50.418 ²⁹²	53.24 ¹⁶	55.305 ³³⁵	25.51 ³	44.596 ²⁸⁴	3.86 ²³
20.8	50.710 ²⁸⁹	53.40 ⁴	55.640 ³³³	25.54 ⁵	44.880 ²⁸³	3.63 ¹⁷
30.7	50.999 ²⁸⁴	53.36 ²⁵	55.973 ³²⁷	25.59 ⁶	45.163 ²⁷⁸	3.80 ⁵⁴
Apr. 9.7	51.283 ²⁷⁴	53.11 ⁴²	56.300 ³¹⁷	25.65 ⁷	45.441 ²⁶⁸	4.34 ⁹⁰
19.7	51.557 ²⁶¹	52.69 ⁵⁷	56.617 ³⁰⁴	25.72 ¹¹	45.709 ²⁵⁶	5.24 ¹²⁰
29.6	51.818 ²⁴³	52.12 ⁶⁸	56.921 ²⁸⁴	25.83 ¹⁶	45.965 ²³⁸	6.44 ¹⁴⁶
May 9.6	52.061 ²²²	51.44 ⁷⁶	57.205 ²⁶¹	25.99 ²¹	46.203 ²¹⁵	7.90 ¹⁶⁴
19.6	52.283 ¹⁹⁵	50.68 ⁸⁰	57.466 ²³¹	26.20 ²⁷	46.418 ¹⁹⁰	9.54 ¹⁷⁷
29.6	52.478 ¹⁶⁵	49.88 ⁸⁰	57.697 ¹⁹⁷	26.47 ³⁵	46.608 ¹⁵⁹	11.31 ¹⁸⁴
June 8.5	52.643 ¹³¹	49.08 ⁷⁸	57.894 ¹⁵⁹	26.82 ⁴¹	46.767 ¹²⁴	13.15 ¹⁸⁴
18.5	52.774 ⁹⁴	48.30 ⁷²	58.053 ¹¹⁶	27.23 ⁴⁸	46.891 ⁸⁷	14.99 ¹⁸⁰
28.5	52.868 ⁵³	47.58 ⁶⁵	58.169 ⁷⁰	27.71 ⁵³	46.978 ⁴⁷	16.79 ¹⁷⁰
July 8.5	52.921 ¹³	46.93 ⁵⁷	58.239 ²³	28.24 ⁵⁶	47.025 ⁶	18.49 ¹⁵⁷
18.4	52.934 ²⁸	46.36 ⁴⁷	58.262 ²⁵	28.80 ⁵⁷	47.031 ³⁴	20.06 ¹⁴⁰
28.4	52.906 ⁶⁸	45.89 ³⁸	58.237 ⁷⁰	29.37 ⁵⁵	46.997 ⁷³	21.46 ¹²⁰
Aug. 7.4	52.838 ¹⁰³	45.51 ²⁹	58.167 ¹¹³	29.92 ⁵¹	46.924 ¹⁰⁹	22.66 ¹⁰⁰
17.3	52.735 ¹³⁵	45.22 ²⁰	58.054 ¹⁴⁹	30.43 ⁴³	46.815 ¹⁴⁰	23.66 ⁷⁵
27.3	52.600 ¹⁵⁹	45.02 ¹¹	57.905 ¹⁷⁸	30.86 ³⁴	46.675 ¹⁶⁴	24.41 ⁵¹
Sept. 6.3	52.441 ¹⁷⁵	44.91 ⁴	57.727 ¹⁹⁸	31.20 ²²	46.511 ¹⁸¹	24.92 ²⁶
16.3	52.266 ¹⁸²	44.87 ⁴	57.529 ²⁰⁷	31.42 ⁹	46.330 ¹⁸⁹	25.18 ¹
26.2	52.084 ¹⁷⁹	44.91 ¹²	57.322 ²⁰⁴	31.51 ⁵	46.141 ¹⁸⁸	25.19 ²⁶
Oct. 6.2	51.905 ¹⁶⁶	45.03 ²⁰	57.118 ¹⁹⁰	31.46 ¹⁸	45.953 ¹⁷⁶	24.93 ⁵³
16.2	51.739 ¹⁴³	45.23 ²⁹	56.928 ¹⁶⁵	31.28 ²⁹	45.777 ¹⁵⁶	24.40 ⁷⁸
26.2	51.596 ¹¹¹	45.52 ⁴⁰	56.763 ¹²⁹	30.99 ³⁹	45.621 ¹²⁷	23.62 ¹⁰⁵
Nov. 5.1	51.485 ⁷²	45.92 ⁵⁰	56.634 ⁸⁵	30.60 ⁴⁵	45.494 ⁹⁰	22.57 ¹²⁹
15.1	51.413 ²⁸	46.42 ⁶¹	56.549 ³⁶	30.15 ⁴⁸	45.404 ⁴⁹	21.28 ¹⁵³
25.1	51.385 ¹⁹	47.03 ⁷³	56.513 ¹⁸	29.67 ⁴⁸	45.355 ⁴	19.75 ¹⁷³
Dec. 5.0	51.404 ⁶⁶	47.76 ⁸³	56.531 ⁷¹	29.19 ⁴⁴	45.351 ⁴³	18.02 ¹⁹⁰
15.0	51.470 ¹¹²	48.59 ⁹²	56.602 ¹²⁴	28.75 ³⁹	45.394 ⁸⁷	16.12 ²⁰⁰
25.0	51.582 ¹⁵⁴	49.51 ⁹⁹	56.726 ¹⁷²	28.36 ³²	45.481 ¹³⁰	14.12 ²⁰⁶
35.0	51.736	50.50	56.898	28.04	45.611	12.06
Mean Place	50.508	56.04	55.447	35.52	44.751	7.22
Sec δ , Tan δ	1.015	-0.172	1.160	-0.587	1.014	+0.168
L α , L δ	0.00	0.0	+0.02	0.0	0.00	0.0
ω α , ω δ	0.00	-1.0	0.00	-1.0	0.00	-1.0
AUTHORITY	A. E.		A. E.		A. E.	

APPARENT PLACES OF STARS, 1924. 395

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	μ Sagittarii. Mag. 4.0			η Sagittarii. Mag. 3.2			δ Sagittarii. Mag. 2.8		
	R. A.		Dec. S.	R. A.		Dec. S.	R. A.		Dec. S.
	^h 18	^m 9	[°] 21 ['] 4	^h 18	^m 12	[°] 36 ['] 46	^h 18	^m 16	[°] 29 ['] 51
Jan. 1.0	11.091	175	39.96	26.741	196	60.51	5.585	179	34.23
10.9	11.266	211	40.20	26.937	239	59.78	5.764	219	33.91
20.9	11.477	241	40.48	27.176	274	59.14	5.983	253	33.63
30.9	11.718	265	40.77	27.450	303	58.59	6.236	279	33.42
Feb. 9.9	11.983	284	41.06	27.753	325	58.15	6.515	300	33.25
19.8	12.267	296	41.30	28.078	341	57.79	6.815	315	33.12
29.8	12.563	305	41.49	28.419	351	57.51	7.130	325	33.00
Mar. 10.8	12.868	309	41.60	28.770	357	57.31	7.455	330	32.90
20.8	13.177	308	41.62	29.127	357	57.19	7.785	332	32.79
30.7	13.485	305	41.55	29.484	353	57.15	8.117	328	32.69
Apr. 9.7	13.790	297	41.40	29.837	345	57.18	8.445	322	32.60
19.7	14.087	286	41.18	30.182	331	57.31	8.767	309	32.53
29.6	14.373	268	40.91	30.513	313	57.51	9.076	294	32.48
May 9.6	14.641	248	40.62	30.826	288	57.82	9.370	271	32.49
19.6	14.889	222	40.33	31.114	258	58.24	9.641	245	32.57
29.6	15.111	191	40.06	31.372	222	58.77	9.886	211	32.71
June 8.5	15.302	155	39.83	31.594	181	59.41	10.097	174	32.94
18.5	15.457	116	39.66	31.775	135	60.14	10.271	132	33.26
28.5	15.573	73	39.56	31.910	86	60.96	10.403	86	33.66
July 8.5	15.646	30	39.53	31.996	35	61.84	10.489	39	34.13
18.4	15.676	14	39.56	32.031	17	62.75	10.528	9	34.65
28.4	15.662	58	39.65	32.014	67	63.66	10.519	57	35.21
Aug. 7.4	15.604	98	39.79	31.947	114	64.53	10.462	101	35.77
17.3	15.506	133	39.94	31.833	155	65.34	10.361	139	36.30
27.3	15.373	160	40.11	31.678	188	66.03	10.222	170	36.79
Sept. 6.3	15.213	180	40.27	31.490	210	66.58	10.052	191	37.19
16.3	15.033	190	40.40	31.280	224	66.96	9.861	204	37.48
26.2	14.843	190	40.50	31.056	224	67.15	9.657	206	37.66
Oct. 6.2	14.653	178	40.56	30.832	210	67.13	9.451	193	37.70
16.2	14.475	155	40.58	30.622	185	66.91	9.258	172	37.61
26.2	14.320	124	40.58	30.437	150	66.51	9.086	138	37.41
Nov. 5.1	14.196	84	40.56	30.287	104	65.95	8.948	96	37.10
15.1	14.112	40	40.55	30.183	53	65.26	8.852	49	36.72
25.1	14.072	10	40.56	30.130	4	64.47	8.803	2	36.29
Dec. 5.0	14.082	58	40.62	30.134	61	63.64	8.805	56	35.85
15.0	14.140	107	40.73	30.195	117	62.80	8.861	107	35.42
25.0	14.247	152	40.91	30.312	169	61.99	8.968	155	35.03
35.0	14.399		41.14	30.481		61.24	9.123		34.69
Mean Place	13.052		48.34	29.022		69.44	7.705		42.64
Sec δ , Tan δ	1.072		-0.385	1.249		-0.748	1.153		-0.574
L α , L δ	+0.01		0.0	+0.02		0.0	+0.02		0.0
ω α , ω δ	0.00		-1.0	0.00		-1.0	0.00		-1.0
AUTHORITY	A. E.			A. N.			A. N.		

396 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	η Serpentis. Mag. 3.4		ϵ Sagittarii. Mag. 2.0		α Telescopii. Mag. 3.8	
	R. A.	Dec. S.	R. A.	Dec. S.	R. A.	Dec. S.
	^h 18 ^m 17	[°] 2 ['] 54	^h 18 ^m 19	[°] 34 ['] 25	^h 18 ^m 21	[°] 46 ['] 0
Jan. 1.0	20.767 ¹⁴⁸	63.38 ¹³³	5.387 ¹⁸⁴	10.48 ⁶²	17.677 ²⁰⁶	34.65 ¹³²
11.0	20.915 ¹⁸²	64.71 ¹³¹	5.571 ²²⁶	9.86 ⁵⁵	17.883 ²⁵⁸	33.33 ¹²²
20.9	21.097 ²¹²	66.02 ¹²³	5.797 ²⁶²	9.31 ⁴⁷	18.141 ³⁰⁰	32.11 ¹⁰⁹
30.9	21.309 ²³⁵	67.25 ¹¹⁰	6.059 ²⁹⁰	8.84 ⁴⁰	18.441 ³³⁶	31.02 ⁹⁵
Feb. 9.9	21.544 ²⁵⁴	68.35 ⁹¹	6.349 ³¹²	8.44 ³⁴	18.777 ³⁶⁴	30.07 ⁷⁹
19.8	21.798 ²⁶⁹	69.26 ⁶⁹	6.661 ³²⁹	8.10 ²⁷	19.141 ³⁸⁴	29.28 ⁶¹
29.8	22.067 ²⁷⁷	69.95 ⁴³	6.990 ³⁴⁰	7.83 ²²	19.525 ³⁹⁹	28.64 ⁴⁶
Mar. 10.8	22.344 ²⁸³	70.38 ¹⁵	7.330 ³⁴⁷	7.61 ¹⁷	19.924 ⁴⁰⁶	28.18 ²⁹
20.8	22.627 ²⁸⁴	70.53 ¹³	7.677 ³⁴⁸	7.44 ¹²	20.330 ⁴⁰⁹	27.89 ¹³
30.7	22.911 ²⁸²	70.40 ³⁹	8.025 ³⁴⁶	7.32 ⁶	20.739 ⁴⁰⁷	27.76 ⁴
Apr. 9.7	23.193 ²⁷⁶	70.01 ⁶³	8.371 ³³⁸	7.26 ⁰	21.146 ³⁹⁷	27.80 ²²
19.7	23.469 ²⁶⁵	69.38 ⁸⁵	8.709 ³²⁷	7.26 ⁸	21.543 ³⁸³	28.02 ⁴⁰
29.7	23.734 ²⁵⁰	68.53 ¹⁰¹	9.036 ³⁰⁹	7.34 ¹⁶	21.926 ³⁶²	28.42 ⁵⁷
May 9.6	23.984 ²³⁰	67.52 ¹¹²	9.345 ²⁸⁶	7.50 ²⁶	22.288 ³³⁴	28.99 ⁷⁴
19.6	24.214 ²⁰⁷	66.40 ¹²¹	9.631 ²⁵⁸	7.76 ³⁶	22.622 ³⁰⁰	29.73 ⁹²
29.6	24.421 ¹⁷⁷	65.19 ¹²²	9.889 ²²³	8.12 ⁴⁷	22.922 ²⁶⁰	30.65 ¹⁰⁷
June 8.5	24.598 ¹⁴⁵	63.97 ¹²²	10.112 ¹⁸⁴	8.59 ⁵⁷	23.182 ²¹²	31.72 ¹²⁰
18.5	24.743 ¹⁰⁸	62.75 ¹¹⁵	10.296 ¹⁴⁰	9.16 ⁶⁶	23.394 ¹⁶⁰	32.92 ¹³⁰
28.5	24.851 ⁶⁸	61.60 ¹⁰⁷	10.436 ⁹¹	9.82 ⁷³	23.554 ¹⁰³	34.22 ¹³⁷
July 8.5	24.919 ²⁷	60.53 ⁹⁶	10.527 ⁴²	10.55 ⁷⁷	23.657 ⁴⁵	35.59 ¹⁴¹
18.4	24.946 ¹⁴	59.57 ⁸⁴	10.569 ⁹	11.32 ⁸⁰	23.702 ¹⁵	37.00 ¹³⁸
28.4	24.932 ⁵⁵	58.73 ⁶⁹	10.560 ⁵⁸	12.12 ⁷⁸	23.687 ⁷⁴	38.38 ¹³²
Aug. 7.4	24.877 ⁹³	58.04 ⁵⁵	10.502 ¹⁰³	12.90 ⁷⁴	23.613 ¹²⁷	39.70 ¹²⁰
17.4	24.784 ¹²⁴	57.49 ⁴⁰	10.399 ¹⁴⁵	13.64 ⁶⁵	23.486 ¹⁷⁶	40.90 ¹⁰⁴
27.3	24.660 ¹⁵²	57.09 ²⁶	10.254 ¹⁷⁸	14.29 ⁵³	23.310 ²¹⁵	41.94 ⁸³
Sept. 6.3	24.508 ¹⁷¹	56.83 ¹⁰	10.076 ²⁰³	14.82 ³⁹	23.095 ²⁴³	42.77 ⁵⁸
16.3	24.337 ¹⁸¹	56.73 ⁴	9.873 ²¹⁴	15.21 ²²	22.852 ²⁶⁰	43.35 ³¹
26.2	24.156 ¹⁸³	56.77 ¹⁹	9.659 ²¹⁷	15.43 ⁵	22.592 ²⁶¹	43.66 ¹
Oct. 6.2	23.973 ¹⁷²	56.96 ³³	9.442 ²⁰⁵	15.48 ¹³	22.331 ²⁵⁰	43.67 ²⁸
16.2	23.801 ¹⁵⁴	57.29 ⁴⁸	9.237 ¹⁸²	15.35 ³⁰	22.081 ²²³	43.39 ⁵⁶
26.2	23.647 ¹²⁷	57.77 ⁶²	9.055 ¹⁴⁹	15.05 ⁴⁵	21.858 ¹⁸⁵	42.83 ⁸²
Nov. 5.1	23.520 ⁹⁰	58.39 ⁷⁹	8.906 ¹⁰⁶	14.60 ⁵⁶	21.673 ¹³⁶	42.01 ¹⁰³
15.1	23.430 ⁵¹	59.18 ⁹⁴	8.800 ⁵⁶	14.04 ⁶⁵	21.537 ⁷⁷	40.98 ¹²¹
25.1	23.379 ⁶	60.12 ¹⁰⁷	8.744 ²	13.39 ⁶⁹	21.460 ¹⁵	39.77 ¹³²
Dec. 5.1	23.373 ⁴⁰	61.19 ¹²⁰	8.742 ⁵³	12.70 ⁷¹	21.445 ⁵⁰	38.45 ¹³⁸
15.0	23.413 ⁸³	62.39 ¹²⁸	8.795 ¹⁰⁶	11.99 ⁶⁸	21.495 ¹¹⁴	37.07 ¹³⁸
25.0	23.496 ¹²⁶	63.67 ¹³⁴	8.901 ¹⁵⁹	11.31 ⁶⁴	21.609 ¹⁷⁵	35.69 ¹³⁵
35.0	23.622	65.01	9.060	10.67	21.784	34.34
Mean Place	22.568	70.78	7.625	18.86	20.313	43.27
Sec δ , Tan δ	1.001	-0.051	1.212	-0.685	1.440	-1.036
L α , L δ	0.00	0.0	+0.02	0.0	+0.03	0.0
ω α , ω δ	0.00	-1.0	0.00	-1.0	+0.01	-1.0
AUTHORITY	A. E.		A. E.		A. E.	

APPARENT PLACES OF STARS, 1924. 397

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	λ Sagittarii. Mag. 2.9		α Lyræ. Mag. 0.1		4 H. Scuti. Mag. 4.7	
	R. A.	Dec. S.	R. A.	Dec. N.	R. A.	Dec. S.
	^h 18 ^m 23	[°] 25 ['] 27	^h 18 ^m 34	[°] 38 ['] 42	^h 18 ^m 38	[°] 9 ['] 7
Jan. 1.0	14.757 ¹⁶⁶	46.54 ⁹	19.960 ¹⁰²	50.70 ³¹⁹	4.970 ¹³⁴	28.63 ⁸⁸
11.0	14.923 ²⁰⁴	46.45 ⁴	20.062 ¹⁵²	47.51 ³¹²	5.104 ¹⁶⁹	29.51 ⁸⁷
20.9	15.127 ²³⁶	46.41 ¹	20.214 ¹⁹⁷	44.39 ²⁹²	5.273 ²⁰¹	30.38 ⁸¹
30.9	15.363 ²⁶³	46.40 ¹	20.411 ²³⁵	41.47 ²⁶¹	5.474 ²²⁶	31.19 ⁷²
Feb. 9.9	15.626 ²⁸⁴	46.39 ¹	20.646 ²⁶⁸	38.86 ²²²	5.700 ²⁴⁷	31.91 ⁵⁸
19.9	15.910 ³⁰⁰	46.38 ³	20.914 ²⁹⁵	36.64 ¹⁷³	5.947 ²⁶⁴	32.49 ⁴¹
29.8	16.210 ³⁰⁸	46.35 ⁸	21.209 ³¹⁴	34.91 ¹¹⁸	6.211 ²⁷⁶	32.90 ²¹
Mar. 10.8	16.518 ³¹⁶	46.27 ¹²	21.523 ³²⁷	33.73 ⁶⁰	6.487 ²⁸⁵	33.11 ⁰
20.8	16.834 ³¹⁹	46.15 ¹⁷	21.850 ³³³	33.13 ¹	6.772 ²⁸⁹	33.11 ²²
30.7	17.153 ³¹⁷	45.98 ¹⁹	22.183 ³³²	33.14 ⁶⁰	7.061 ²⁹⁰	32.89 ⁴³
Apr. 9.7	17.470 ³¹¹	45.79 ²²	22.515 ³²³	33.74 ¹¹⁶	7.351 ²⁸⁸	32.46 ⁶¹
19.7	17.781 ³⁰¹	45.57 ²²	22.838 ³⁰⁸	34.90 ¹⁶⁶	7.639 ²⁷⁹	31.85 ⁷⁷
29.7	18.082 ²⁸⁸	45.35 ²²	23.146 ²⁸⁷	36.56 ²¹⁰	7.918 ²⁶⁸	31.08 ⁸⁹
May 9.6	18.370 ²⁶⁶	45.13 ¹⁷	23.433 ²⁵⁸	38.66 ²⁴⁶	8.186 ²⁵¹	30.19 ⁹⁵
19.6	18.636 ²⁴¹	44.96 ¹¹	23.691 ²²⁵	41.12 ²⁷⁴	8.437 ²²⁹	29.24 ¹⁰⁰
29.6	18.877 ²¹⁰	44.85 ⁵	23.916 ¹⁸⁵	43.86 ²⁹²	8.666 ²⁰²	28.24 ⁹⁹
June 8.6	19.087 ¹⁷⁵	44.80 ⁴	24.101 ¹⁴¹	46.78 ³⁰²	8.868 ¹⁷⁰	27.25 ⁹⁶
18.5	19.262 ¹³⁴	44.84 ¹²	24.242 ⁹⁴	49.80 ³⁰³	9.038 ¹³³	26.29 ⁸⁹
28.5	19.396 ⁹⁰	44.96 ²¹	24.336 ⁴⁴	52.83 ²⁹⁶	9.171 ⁹²	25.40 ⁷⁹
July 8.5	19.486 ⁴⁵	45.17 ²⁷	24.380 ⁶	55.79 ²⁸²	9.263 ⁵¹	24.61 ⁶⁹
18.4	19.531 ³	45.44 ³³	24.374 ⁵⁷	58.61 ²⁶²	9.314 ⁸	23.92 ⁵⁷
28.4	19.528 ⁴⁸	45.77 ³⁶	24.317 ¹⁰⁵	61.23 ²³⁴	9.322 ³⁶	23.35 ⁴⁴
Aug. 7.4	19.480 ⁹⁰	46.13 ³⁸	24.212 ¹⁵⁰	63.57 ²⁰³	9.286 ⁷⁵	22.91 ³³
17.4	19.390 ¹²⁹	46.51 ³⁶	24.062 ¹⁸⁹	65.60 ¹⁶⁷	9.211 ¹¹²	22.58 ²²
27.3	19.261 ¹⁶⁰	46.87 ³³	23.873 ²²²	67.27 ¹²⁶	9.099 ¹⁴¹	22.36 ¹⁰
Sept. 6.3	19.101 ¹⁸²	47.20 ²⁶	23.651 ²⁴⁶	68.53 ⁸⁵	8.958 ¹⁶⁴	22.26 ¹
16.3	18.919 ¹⁹⁵	47.46 ²⁰	23.405 ²⁶⁰	69.38 ⁴⁰	8.794 ¹⁷⁸	22.25 ⁷
26.3	18.724 ¹⁹⁷	47.66 ¹⁰	23.145 ²⁶⁵	69.78 ⁷	8.616 ¹⁸¹	22.32 ¹⁶
Oct. 6.2	18.527 ¹⁸⁸	47.76 ²	22.880 ²⁵⁹	69.71 ⁵³	8.435 ¹⁷⁶	22.48 ²⁵
16.2	18.339 ¹⁶⁶	47.78 ⁶	22.621 ²⁴¹	69.18 ¹⁰⁰	8.259 ¹⁵⁹	22.73 ³²
26.2	18.173 ¹³⁷	47.72 ¹²	22.380 ²¹⁵	68.18 ¹⁴⁶	8.100 ¹³⁴	23.05 ⁴²
Nov. 5.1	18.036 ⁹⁸	47.60 ¹⁶	22.165 ¹⁷⁹	66.72 ¹⁸⁹	7.966 ¹⁰¹	23.47 ⁵⁰
15.1	17.938 ⁵³	47.44 ¹⁹	21.986 ¹³⁷	64.83 ²²⁸	7.865 ⁶²	23.97 ⁶¹
25.1	17.885 ³	47.25 ¹⁹	21.849 ⁸⁸	62.55 ²⁶⁴	7.803 ¹⁹	24.58 ⁶⁸
Dec. 5.1	17.882 ⁴⁶	47.06 ¹⁷	21.761 ³⁵	59.91 ²⁹¹	7.784 ²⁶	25.26 ⁷⁸
15.0	17.928 ⁹⁶	46.89 ¹³	21.726 ¹⁹	57.00 ³¹¹	7.810 ⁶⁹	26.04 ⁸⁴
25.0	18.024 ¹⁴²	46.76 ⁸	21.745 ⁷²	53.89 ³²¹	7.879 ¹¹²	26.88 ⁸⁹
35.0	18.166	46.68	21.817	50.68	7.991	27.77
Mean Place	16.806	54.39	21.915	43.46	6.823	35.59
Sec δ , Tan δ	1.108	-0.476	1.282	+0.801	1.013	-0.161
L α , L δ	+0.01	0.0	-0.02	+0.1	0.00	+0.1
ω α , ω δ	0.00	-1.0	-0.01	-1.0	0.00	-1.0
AUTHORITY	A. N.		A. E.			

398 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	♄ Sagittarii. Mag. 3.3		♋ Pavonis. Mag. 4.4		♄ Sagittarii. Mag. 6.2	
	R. A.	Dec. S.	R. A.	Dec. S.	R. A.	Dec. S.
	^h 18 ^m 40	[°] 27 ['] 4	^h 18 ^m 45	[°] 62 ['] 16	^h 18 ^m 46	[°] 22 ['] 14
Jan. 1.0	52.398 ¹⁴⁹	6.19 ²⁶	6.81 ²³	29.06 ²³⁰	14.289 ¹³⁸	54.42 ³
11.0	52.547 ¹⁸⁹	5.93 ²³	7.04 ³¹	26.76 ²²¹	14.427 ¹⁷⁶	54.45 ⁴
21.0	52.736 ²²³	5.70 ²¹	7.35 ³⁷	24.55 ²⁰⁵	14.603 ²¹⁰	54.49 ³
30.9	52.959 ²⁵²	5.49 ²⁰	7.72 ⁴⁴	22.50 ¹⁸⁶	14.813 ²³⁸	54.52 ²
Feb. 9.9	53.211 ²⁷⁵	5.29 ²¹	8.16 ⁴⁹	20.64 ¹⁶³	15.051 ²⁶⁰	54.54 ⁴
19.9	53.486 ²⁹⁴	5.08 ²³	8.65 ⁵³	19.01 ¹³⁶	15.311 ²⁷⁹	54.50 ⁹
29.8	53.780 ³⁰⁷	4.85 ²⁵	9.18 ⁵⁶	17.65 ¹⁰⁷	15.590 ²⁹³	54.41 ¹⁷
Mar. 10.8	54.087 ³¹⁷	4.60 ²⁹	9.74 ⁵⁸	16.58 ⁷⁸	15.883 ³⁰³	54.24 ²⁵
20.8	54.404 ³²²	4.31 ³¹	10.32 ⁵⁹	15.80 ⁴⁶	16.186 ³⁰⁹	53.99 ³⁴
30.8	54.726 ³²⁴	4.00 ³⁴	10.91 ⁵⁹	15.34 ¹⁴	16.495 ³¹²	53.65 ⁴⁰
Apr. 9.7	55.050 ³²¹	3.66 ³⁴	11.50 ⁵⁸	15.20 ¹⁸	16.807 ³¹⁰	53.25 ⁴⁶
19.7	55.371 ³¹³	3.32 ³²	12.08 ⁵⁷	15.38 ⁵⁰	17.117 ³⁰³	52.79 ⁴⁸
29.7	55.684 ³⁰¹	3.00 ²⁹	12.65 ⁵⁴	15.88 ⁸²	17.420 ²⁹³	52.31 ⁴⁹
May 9.7	55.985 ²⁸³	2.71 ²³	13.19 ⁵⁰	16.70 ¹¹²	17.713 ²⁷⁵	51.82 ⁴⁷
19.6	56.268 ²⁵⁸	2.48 ¹⁵	13.69 ⁴⁶	17.82 ¹⁴⁰	17.988 ²⁵³	51.35 ⁴¹
29.6	56.526 ²²⁹	2.33 ⁶	14.15 ³⁹	19.22 ¹⁶⁵	18.241 ²²⁵	50.94 ³⁴
June 8.6	56.755 ¹⁹⁴	2.27 ⁵	14.54 ³³	20.87 ¹⁸⁶	18.466 ¹⁹²	50.60 ²⁵
18.5	56.949 ¹⁵⁵	2.32 ¹⁵	14.87 ²⁵	22.73 ²⁰³	18.658 ¹⁵³	50.35 ¹⁵
28.5	57.104 ¹⁰⁹	2.47 ²⁵	15.12 ¹⁷	24.76 ²¹⁴	18.811 ¹¹¹	50.20 ⁵
July 8.5	57.213 ⁶³	2.72 ³⁴	15.29 ⁸	26.90 ²²⁰	18.922 ⁶⁵	50.15 ⁵
18.5	57.276 ¹⁵	3.06 ⁴²	15.37 ¹	29.10 ²¹⁸	18.987 ¹⁹	50.20 ¹⁵
28.4	57.291 ³⁴	3.48 ⁴⁶	15.36 ⁹	31.28 ²¹⁰	19.006 ²⁷	50.35 ²²
Aug. 7.4	57.257 ⁷⁷	3.94 ⁴⁸	15.27 ¹⁸	33.38 ¹⁹³	18.979 ⁷¹	50.57 ²⁷
17.4	57.180 ¹¹⁹	4.42 ⁴⁷	15.09 ²⁵	35.31 ¹⁷¹	18.908 ¹¹¹	50.84 ³⁰
27.3	57.061 ¹⁵³	4.89 ⁴⁴	14.84 ³¹	37.02 ¹⁴¹	18.797 ¹⁴⁴	51.14 ³¹
Sept. 6.3	56.908 ¹⁷⁹	5.33 ³⁸	14.53 ³⁷	38.43 ¹⁰⁶	18.653 ¹⁷⁰	51.45 ³⁰
16.3	56.729 ¹⁹⁴	5.71 ²⁹	14.16 ³⁹	39.49 ⁶⁶	18.483 ¹⁸⁶	51.75 ²⁶
26.3	56.535 ¹⁹⁹	6.00 ¹⁹	13.77 ⁴¹	40.15 ²³	18.297 ¹⁹²	52.01 ²¹
Oct. 6.2	56.336 ¹⁹⁴	6.19 ⁹	13.36 ⁴⁰	40.38 ²¹	18.105 ¹⁸⁶	52.22 ¹⁶
16.2	56.142 ¹⁷⁶	6.28 ²	12.96 ³⁷	40.17 ⁶⁵	17.919 ¹⁷¹	52.38 ¹⁰
26.2	55.966 ¹⁴⁷	6.26 ¹⁰	12.59 ³³	39.52 ¹⁰⁸	17.748 ¹⁴⁵	52.48 ⁵
Nov. 5.2	55.819 ¹¹²	6.16 ¹⁹	12.26 ²⁶	38.44 ¹⁴⁴	17.603 ¹¹⁰	52.53 ¹
15.1	55.707 ⁶⁹	5.97 ²³	12.00 ¹⁹	37.00 ¹⁷⁶	17.493 ⁷⁰	52.54 ⁰
25.1	55.638 ²⁰	5.74 ²⁸	11.81 ¹⁰	35.24 ²⁰²	17.423 ²⁵	52.54 ⁰
Dec. 5.1	55.618 ²⁹	5.46 ²⁷	11.71 ¹	33.22 ²¹⁸	17.398 ²³	52.54 ⁰
15.0	55.647 ⁷⁸	5.19 ²⁷	11.70 ⁹	31.04 ²²⁹	17.421 ⁶⁹	52.54 ²
25.0	55.725 ¹²⁴	4.92 ²⁵	11.79 ¹⁸	28.75 ²³¹	17.490 ¹¹⁵	52.56 ⁵
35.0	55.849	4.67	11.97	26.44	17.605	52.61
Mean Place	54.503	13.06	10.74	35.91	16.311	60.99
Sec δ, Tan δ	1.123	-0.511	2.150	-1.903	1.080	-0.409
L α, L δ	+0.01	+0.1	+0.05	+0.1	+0.01	+0.1
ω α, ω δ	+0.01	-1.0	+0.02	-1.0	+0.01	-1.0
AUTHORITY	A. E.					

APPARENT PLACES OF STARS, 1924. 399

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	β Lyræ. Mag. 3.4-4.1		σ Sagittarii. Mag. 2.1		ξ Sagittarii. Mag. 3.6	
	R. A.	Dec. N.	R. A.	Dec. S.	R. A.	Dec. S.
	^h 18 47 ^m _s	[°] 33 16 [']	^h 18 50 ^m _s	[°] 26 23 [']	^h 18 53 ^m _s	[°] 21 12 [']
Jan. 1.0	14.565 ₉₂	32.29 ₃₀₀	31.051 ₁₃₈	27.32 ₂₅	9.784 ₁₃₀	22.31 ₇
11.0	14.657 ₁₃₇	29.29 ₂₉₄	31.189 ₁₇₈	27.07 ₂₃	9.914 ₁₆₈	22.38 ₈
21.0	14.794 ₁₇₈	26.35 ₂₇₈	31.367 ₂₁₂	26.84 ₂₃	10.082 ₂₀₁	22.46 ₇
30.9	14.972 ₂₁₅	23.57 ₂₅₁	31.579 ₂₄₂	26.61 ₂₃	10.283 ₂₃₀	22.53 ₂
Feb. 9.9	15.187 ₂₄₆	21.06 ₂₁₄	31.821 ₂₆₇	26.38 ₂₄	10.513 ₂₅₄	22.55 ₃
19.9	15.433 ₂₇₂	18.92 ₁₇₀	32.088 ₂₈₆	26.14 ₂₈	10.767 ₂₇₂	22.52 ₁₀
29.8	15.705 ₂₉₂	17.22 ₁₁₉	32.374 ₃₀₁	25.86 ₃₁	11.039 ₂₈₇	22.42 ₁₉
Mar. 10.8	15.997 ₃₀₆	16.03 ₆₄	32.675 ₃₁₂	25.55 ₃₅	11.326 ₂₉₉	22.23 ₂₉
20.8	16.303 ₃₁₄	15.39 ₆	32.987 ₃₁₉	25.20 ₃₉	11.625 ₃₀₆	21.94 ₃₇
30.8	16.617 ₃₁₆	15.33 ₅₀	33.306 ₃₂₃	24.81 ₄₂	11.931 ₃₀₉	21.57 ₄₅
Apr. 9.7	16.933 ₃₁₁	15.83 ₁₀₃	33.629 ₃₂₁	24.39 ₄₂	12.240 ₃₀₉	21.12 ₅₂
19.7	17.244 ₃₀₁	16.86 ₁₅₂	33.950 ₃₁₅	23.97 ₄₁	12.549 ₃₀₃	20.60 ₅₅
29.7	17.545 ₂₈₃	18.38 ₁₉₄	34.265 ₃₀₃	23.56 ₃₈	12.852 ₂₉₄	20.05 ₅₇
May 9.7	17.828 ₂₅₉	20.32 ₂₃₀	34.568 ₂₈₇	23.18 ₃₂	13.146 ₂₇₇	19.48 ₅₅
19.6	18.087 ₂₃₀	22.62 ₂₅₇	34.855 ₂₆₅	22.86 ₂₄	13.423 ₂₅₇	18.93 ₅₀
29.6	18.317 ₁₉₆	25.19 ₂₇₆	35.120 ₂₃₆	22.62 ₁₄	13.680 ₂₂₉	18.43 ₄₃
June 8.6	18.513 ₁₅₅	27.95 ₂₈₇	35.356 ₂₀₁	22.48 ₄	13.909 ₁₉₆	18.00 ₃₄
18.5	18.668 ₁₁₂	30.82 ₂₈₈	35.557 ₁₆₂	22.44 ₈	14.105 ₁₅₉	17.66 ₂₄
28.5	18.780 ₆₅	33.70 ₂₈₃	35.719 ₁₁₉	22.52 ₁₈	14.264 ₁₁₇	17.42 ₁₃
July 8.5	18.845 ₁₇	36.53 ₂₇₁	35.838 ₇₂	22.70 ₂₉	14.381 ₇₂	17.29 ₂
18.5	18.862 ₃₁	39.24 ₂₅₂	35.910 ₂₄	22.99 ₃₇	14.453 ₂₅	17.27 ₈
28.4	18.831 ₇₈	41.76 ₂₂₇	35.934 ₂₄	23.36 ₄₃	14.478 ₂₁	17.35 ₁₆
Aug. 7.4	18.753 ₁₂₂	44.03 ₁₉₈	35.910 ₆₉	23.79 ₄₈	14.457 ₆₄	17.51 ₂₄
17.4	18.631 ₁₆₁	46.01 ₁₆₅	35.841 ₁₁₁	24.27 ₄₈	14.393 ₁₀₆	17.75 ₂₇
27.3	18.470 ₁₉₄	47.66 ₁₂₈	35.730 ₁₄₆	24.75 ₄₆	14.287 ₁₃₈	18.02 ₃₀
Sept. 6.3	18.276 ₂₁₉	48.94 ₈₈	35.584 ₁₇₃	25.21 ₄₀	14.149 ₁₆₆	18.32 ₂₉
16.3	18.057 ₂₃₅	49.82 ₄₇	35.411 ₁₉₂	25.61 ₃₄	13.983 ₁₈₂	18.61 ₂₈
26.3	17.822 ₂₄₁	50.29 ₄	35.219 ₁₉₈	25.95 ₂₅	13.801 ₁₉₀	18.89 ₂₄
Oct. 6.2	17.581 ₂₃₈	50.33 ₄₀	35.021 ₁₉₃	26.20 ₁₅	13.611 ₁₈₆	19.13 ₁₉
16.2	17.343 ₂₂₃	49.93 ₈₄	34.828 ₁₇₈	26.35 ₅	13.425 ₁₇₁	19.32 ₁₄
26.2	17.120 ₂₀₀	49.09 ₁₂₇	34.650 ₁₅₂	26.40 ₅	13.254 ₁₄₇	19.46 ₁₁
Nov. 5.2	16.920 ₁₆₈	47.82 ₁₆₉	34.498 ₁₁₇	26.35 ₁₂	13.107 ₁₁₄	19.57 ₇
15.1	16.752 ₁₂₈	46.13 ₂₀₇	34.381 ₇₆	26.23 ₁₈	12.993 ₇₄	19.64 ₆
25.1	16.624 ₈₄	44.06 ₂₄₀	34.305 ₂₉	26.05 ₂₂	12.919 ₃₀	19.70 ₅
Dec. 5.1	16.540 ₃₆	41.66 ₂₆₉	34.276 ₁₉	25.83 ₂₄	12.889 ₁₆	19.75 ₆
15.0	16.504 ₁₄	38.97 ₂₈₈	34.295 ₆₇	25.59 ₂₄	12.905 ₆₂	19.81 ₈
25.0	16.518 ₆₃	36.09 ₃₀₀	34.362 ₁₁₃	25.35 ₂₄	12.967 ₁₀₆	19.89 ₈
35.0	16.581	33.09	34.475	25.11	13.073	19.97
Mean Place	16.422	24.73	33.153	33.61	11.790	28.54
Sec δ , Tan δ	1.196	+0.656	1.116	-0.496	1.073	-0.388
L α , L δ	-0.02	+0.1	+0.01	+0.1	+0.01	+0.1
ω α , ω δ	-0.01	-1.0	+0.01	-1.0	+0.01	-1.0
AUTHORITY	A. E.		A. E.		A. N.	

400 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	γ Lyræ. Mag. 3·3		ε Aquilæ. Mag. 4·2		ζ Sagittarii. Mag. 2·7	
	R. A.	Dec. N.	R. A.	Dec. N.	R. A.	Dec. S.
	^h 18 56 _s	[°] 32 34 [']	^h 18 56 _s	[°] 14 57 [']	^h 18 57 _s	[°] 29 59 [']
Jan. 1·0	4·170 ₈₂	71·41 ₂₉₅	8·608 ₉₇	57·29 ₂₁₉	44·439 ₁₃₄	18·56 ₄₉
11·0	4·252 ₁₂₇	68·46 ₂₉₁	8·705 ₁₃₅	55·10 ₂₁₅	44·573 ₁₇₅	18·07 ₄₉
21·0	4·379 ₁₆₈	65·55 ₂₇₆	8·840 ₁₆₉	52·95 ₂₀₂	44·748 ₂₁₂	17·58 ₄₇
30·9	4·547 ₂₀₆	62·79 ₂₅₁	9·009 ₁₉₈	50·93 ₁₈₄	44·960 ₂₄₃	17·11 ₄₆
Feb. 9·9	4·753 ₂₃₇	60·28 ₂₁₆	9·207 ₂₂₅	49·09 ₁₅₅	45·203 ₂₆₉	16·65 ₄₇
19·9	4·990 ₂₆₄	58·12 ₁₇₃	9·432 ₂₄₅	47·54 ₁₂₀	45·472 ₂₈₉	16·18 ₄₆
29·9	5·254 ₂₈₆	56·39 ₁₂₂	9·677 ₂₆₂	46·34 ₈₂	45·761 ₃₀₇	15·72 ₄₇
Mar. 10·8	5·540 ₃₀₁	55·17 ₆₉	9·939 ₂₇₅	45·52 ₃₉	46·068 ₃₂₀	15·25 ₄₈
20·8	5·841 ₃₁₁	54·48 ₁₂	10·214 ₂₈₂	45·13 ₅	46·388 ₃₂₇	14·77 ₄₈
30·8	6·152 ₃₁₄	54·36 ₄₄	10·496 ₂₈₇	45·18 ₄₈	46·715 ₃₃₂	14·29 ₄₆
Apr. 9·7	6·466 ₃₁₂	54·80 ₉₈	10·783 ₂₈₅	45·66 ₈₉	47·047 ₃₃₂	13·83 ₄₄
19·7	6·778 ₃₀₂	55·78 ₁₄₆	11·068 ₂₈₀	46·55 ₁₂₆	47·379 ₃₂₈	13·39 ₃₉
29·7	7·080 ₂₈₈	57·24 ₁₈₉	11·348 ₂₆₈	47·81 ₁₅₈	47·707 ₃₁₇	13·00 ₃₃
May 9·7	7·368 ₂₆₅	59·13 ₂₂₅	11·616 ₂₅₂	49·39 ₁₈₃	48·024 ₃₀₀	12·67 ₂₃
19·6	7·633 ₂₃₇	61·38 ₂₅₃	11·868 ₂₂₈	51·22 ₂₀₁	48·324 ₂₇₉	12·44 ₁₃
29·6	7·870 ₂₀₃	63·91 ₂₇₃	12·096 ₂₀₂	53·23 ₂₁₄	48·603 ₂₄₉	12·31 ₀
June 8·6	8·073 ₁₆₅	66·64 ₂₈₅	12·298 ₁₆₈	55·37 ₂₁₉	48·852 ₂₁₅	12·31 ₁₃
18·6	8·238 ₁₂₂	69·49 ₂₈₇	12·466 ₁₃₂	57·56 ₂₁₈	49·067 ₁₇₄	12·44 ₂₅
28·5	8·360 ₇₅	72·36 ₂₈₄	12·598 ₉₁	59·74 ₂₁₂	49·241 ₁₃₀	12·69 ₃₈
July 8·5	8·435 ₂₈	75·20 ₂₇₁	12·689 ₄₈	61·86 ₂₀₀	49·371 ₈₁	13·07 ₄₈
18·5	8·463 ₂₁	77·91 ₂₅₅	12·737 ₄	63·86 ₁₈₃	49·452 ₃₂	13·55 ₅₇
28·4	8·442 ₆₈	80·46 ₂₃₀	12·741 ₃₈	65·69 ₁₆₃	49·484 ₁₈	14·12 ₆₃
Aug. 7·4	8·374 ₁₁₃	82·76 ₂₀₃	12·703 ₈₀	67·32 ₁₄₀	49·466 ₆₆	14·75 ₆₅
17·4	8·261 ₁₅₂	84·79 ₁₇₀	12·623 ₁₁₆	68·72 ₁₁₅	49·400 ₁₀₉	15·40 ₆₅
27·4	8·109 ₁₈₆	86·49 ₁₃₄	12·507 ₁₄₈	69·87 ₈₇	49·291 ₁₄₇	16·05 ₆₀
Sept. 6·3	7·923 ₂₁₃	87·83 ₉₅	12·359 ₁₇₂	70·74 ₅₉	49·144 ₁₇₆	16·65 ₅₃
16·3	7·710 ₂₃₀	88·78 ₅₄	12·187 ₁₈₈	71·33 ₂₈	48·968 ₁₉₆	17·18 ₄₂
26·3	7·480 ₂₃₈	89·32 ₁₂	11·999 ₁₉₅	71·61 ₁	48·772 ₂₀₄	17·60 ₃₀
Oct. 6·3	7·242 ₂₃₅	89·44 ₃₂	11·804 ₁₉₁	71·60 ₃₂	48·568 ₂₀₁	17·90 ₁₇
16·2	7·007 ₂₂₃	89·12 ₇₅	11·613 ₁₈₀	71·28 ₆₃	48·367 ₁₈₆	18·07 ₂
26·2	6·784 ₂₀₁	88·37 ₁₁₈	11·433 ₁₅₈	70·65 ₉₄	48·181 ₁₆₁	18·09 ₁₁
Nov. 5·2	6·583 ₁₇₁	87·19 ₁₅₉	11·275 ₁₃₀	69·71 ₁₂₂	48·020 ₁₂₇	17·98 ₂₃
15·1	6·412 ₁₃₃	85·60 ₁₉₉	11·145 ₉₄	68·49 ₁₅₀	47·893 ₈₅	17·75 ₃₃
25·1	6·279 ₉₀	83·61 ₂₃₂	11·051 ₅₄	66·99 ₁₇₅	47·808 ₃₈	17·42 ₃₉
Dec. 5·1	6·189 ₄₃	81·29 ₂₆₁	10·997 ₁₁	65·24 ₁₉₅	47·770 ₁₂	17·03 ₄₅
15·1	6·146 ₆	78·68 ₂₈₁	10·986 ₃₁	63·29 ₂₁₀	47·782 ₆₁	16·58 ₄₇
25·0	6·152 ₅₄	75·87 ₂₉₅	11·017 ₇₃	61·19 ₂₁₉	47·843 ₁₁₀	16·11 ₄₈
35·0	6·206	72·92	11·090	59·00	47·953	15·63
Mean Place	6·002	63·63	10·351	50·16	46·620	24·37
Sec δ, Tan δ	1·187	+0·639	1·035	+0·267	1·155	-0·577
L α, L δ	-0·02	+0·1	-0·01	+0·1	+0·01	+0·1
ω α, ω δ	-0·01	-1·0	0·00	-1·0	+0·01	-1·0
AUTHORITY	A. E.		A. N.		A. N.	

APPARENT PLACES OF STARS, 1924. 401

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	ζ Aquilæ. Mag. 3.0		τ Sagittarii. Mag. 3.4		λ Aquilæ. Mag. 3.6	
	R. A.	Dec. N.	R. A.	Dec. S.	R. A.	Dec. S.
	^h 19	^m I	^h 19	^m 2	^h 19	^m 2
	^s	[°] 13	^s	[°] 27	^s	[°] 4
	I	44	2	46	2	59
Jan. 1.0	53.256 ⁹²	64.85 ²¹¹	9.663 ¹²⁶	52.89 ³⁷	11.117 ¹⁰⁷	45.00 ¹⁰⁶
11.0	53.348 ¹³¹	62.74 ²⁰⁸	9.789 ¹⁶⁸	52.52 ³⁶	11.224 ¹⁴³	46.06 ¹⁰³
21.0	53.479 ¹⁶⁴	60.66 ¹⁹⁷	9.957 ²⁰³	52.16 ³⁶	11.367 ¹⁷⁵	47.09 ⁹⁶
30.9	53.643 ¹⁹⁴	58.69 ¹⁷⁷	10.160 ²³³	51.80 ³⁷	11.542 ²⁰²	48.05 ⁸⁵
Feb. 9.9	53.837 ²²⁰	56.92 ¹⁵¹	10.393 ²⁶⁰	51.43 ³⁸	11.744 ²²⁶	48.90 ⁶⁸
19.9	54.057 ²⁴¹	55.41 ¹¹⁷	10.653 ²⁸²	51.05 ⁴¹	11.970 ²⁴⁶	49.58 ⁴⁹
29.9	54.298 ²⁶⁰	54.24 ⁸⁰	10.935 ²⁹⁸	50.64 ⁴⁴	12.216 ²⁶²	50.07 ²⁴
Mar. 10.8	54.558 ²⁷²	53.44 ³⁸	11.233 ³¹¹	50.20 ⁴⁷	12.478 ²⁷⁴	50.31 ¹
20.8	54.830 ²⁸²	53.06 ⁵	11.544 ³²⁰	49.73 ⁴⁹	12.752 ²⁸³	50.30 ²⁶
30.8	55.112 ²⁸⁶	53.11 ⁴⁷	11.864 ³²⁶	49.24 ⁵⁰	13.035 ²⁸⁷	50.04 ⁵¹
Apr. 9.7	55.398 ²⁸⁶	53.58 ⁸⁸	12.190 ³²⁶	48.74 ⁵⁰	13.322 ²⁸⁸	49.53 ⁷⁴
19.7	55.684 ²⁸¹	54.46 ¹²³	12.516 ³²²	48.24 ⁴⁸	13.610 ²⁸⁴	48.79 ⁹³
29.7	55.965 ²⁷¹	55.69 ¹⁵⁴	12.838 ³¹³	47.76 ⁴²	13.894 ²⁷⁵	47.86 ¹⁰⁹
May 9.7	56.236 ²⁵⁵	57.23 ¹⁷⁹	13.151 ²⁹⁷	47.34 ³⁴	14.169 ²⁶¹	46.77 ¹²⁰
19.6	56.491 ²³³	59.02 ¹⁹⁸	13.448 ²⁷⁷	47.00 ²⁵	14.430 ²⁴²	45.57 ¹²⁵
29.6	56.724 ²⁰⁶	61.00 ²⁰⁹	13.725 ²⁴⁸	46.75 ¹⁴	14.672 ²¹⁶	44.32 ¹²⁸
June 8.6	56.930 ¹⁷⁴	63.09 ²¹⁵	13.973 ²¹⁵	46.61 ¹	14.888 ¹⁸⁶	43.04 ¹²⁶
18.6	57.104 ¹³⁷	65.24 ²¹⁵	14.188 ¹⁷⁶	46.60 ¹¹	15.074 ¹⁵¹	41.78 ¹¹⁹
28.5	57.241 ⁹⁷	67.39 ²⁰⁷	14.364 ¹³¹	46.71 ²⁴	15.225 ¹¹¹	40.59 ¹¹⁰
July 8.5	57.338 ⁵⁵	69.46 ¹⁹⁶	14.495 ⁸⁵	46.95 ³⁵	15.336 ⁷⁰	39.49 ⁹⁸
18.5	57.393 ¹¹	71.42 ¹⁸⁰	14.580 ³⁶	47.30 ⁴⁶	15.406 ²⁶	38.51 ⁸⁴
28.4	57.404 ³²	73.22 ¹⁶¹	14.616 ¹⁴	47.76 ⁵²	15.432 ¹⁷	37.67 ⁶⁹
Aug. 7.4	57.372 ⁷³	74.83 ¹³⁸	14.602 ⁶⁰	48.28 ⁵⁶	15.415 ⁵⁹	36.98 ⁵⁴
17.4	57.299 ¹¹¹	76.21 ¹¹³	14.542 ¹⁰⁴	48.84 ⁵⁸	15.356 ⁹⁶	36.44 ³⁹
27.4	57.188 ¹⁴³	77.34 ⁸⁶	14.438 ¹⁴¹	49.42 ⁵⁶	15.260 ¹²⁹	36.05 ²⁵
Sept. 6.3	57.045 ¹⁶⁷	78.20 ⁵⁸	14.297 ¹⁷⁰	49.98 ⁴⁹	15.131 ¹⁵⁴	35.80 ¹⁰
16.3	56.878 ¹⁸⁵	78.78 ³⁰	14.127 ¹⁹⁰	50.47 ⁴³	14.977 ¹⁷¹	35.70 ³
26.3	56.693 ¹⁹²	79.08 ⁰	13.937 ¹⁹⁹	50.90 ³²	14.806 ¹⁷⁹	35.73 ¹⁶
Oct. 6.3	56.501 ¹⁹⁰	79.08 ³⁰	13.738 ¹⁹⁶	51.22 ²⁰	14.627 ¹⁷⁷	35.89 ²⁸
16.2	56.311 ¹⁷⁹	78.78 ⁵⁹	13.542 ¹⁸⁴	51.42 ¹⁰	14.450 ¹⁶⁵	36.17 ⁴⁰
26.2	56.132 ¹⁵⁸	78.19 ⁸⁸	13.358 ¹⁶⁰	51.52 ³	14.285 ¹⁴⁴	36.57 ⁵²
Nov. 5.2	55.974 ¹³⁰	77.31 ¹¹⁷	13.198 ¹²⁶	51.49 ¹²	14.141 ¹¹⁵	37.09 ⁶⁴
15.1	55.844 ⁹⁶	76.14 ¹⁴³	13.072 ⁸⁶	51.37 ²¹	14.026 ⁸⁰	37.73 ⁷⁵
25.1	55.748 ⁵⁷	74.71 ¹⁶⁷	12.986 ⁴⁰	51.16 ²⁷	13.946 ⁴¹	38.48 ⁸⁶
Dec. 5.1	55.691 ¹⁶	73.04 ¹⁸⁸	12.946 ⁷	50.89 ³¹	13.905 ²	39.34 ⁹⁵
15.1	55.675 ²⁸	71.16 ²⁰²	12.953 ⁵⁵	50.58 ³⁴	13.907 ⁴³	40.29 ¹⁰³
25.0	55.703 ⁶⁹	69.14 ²¹¹	13.008 ¹⁰²	50.24 ³⁴	13.950 ⁸⁵	41.32 ¹⁰⁶
35.0	55.772	67.03	13.110	49.90	14.035	42.38
Mean Place	54.996	57.79	11.799	58.44	12.935	51.27
Sec δ, Tan δ	1.029	+0.245	1.130	-0.527	1.004	-0.087
L α, L δ	-0.01	+0.1	+0.01	+0.1	0.00	+0.1
ω α, ω δ	0.00	-1.0	+0.01	-1.0	0.00	-1.0
AUTHORITY	A. E.				A. E.	

402 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	α Coronæ Aust. Mag. 4.1		π Sagittarii. Mag. 3.0		ψ Sagittarii. Mag. 4.9	
	R. A.	Dec. S.	R. A.	Dec. S.	R. A.	Dec. S.
	^h 19 _s ^m 4	[°] 38 ['] 1	^h 19 _s ^m 5	[°] 21 ['] 8	^h 19 _s ^m 10	[°] 25 ['] 23
Jan. 1.0	15.720 ¹³⁶	23.28 ¹⁰¹	12.680 ¹¹⁷	39.02 ⁴	50.799 ¹¹⁴	15.52 ²⁴
11.0	15.856 ¹⁸²	22.27 ¹⁰⁰	12.797 ¹⁵⁶	39.06 ³	50.913 ¹⁵⁵	15.28 ²⁶
21.0	16.038 ²²⁴	21.27 ⁹⁷	12.953 ¹⁸⁹	39.09 ¹	51.068 ¹⁹¹	15.02 ²⁷
30.9	16.262 ²⁵⁸	20.30 ⁹³	13.142 ²²⁰	39.10 ⁴	51.259 ²²¹	14.75 ²⁹
Feb. 9.9	16.520 ²⁸⁸	19.37 ⁸⁷	13.362 ²⁴⁴	39.06 ¹⁰	51.480 ²⁴⁷	14.46 ³⁴
19.9	16.808 ³¹³	18.50 ⁸²	13.606 ²⁶⁵	38.96 ¹⁷	51.727 ²⁷⁰	14.12 ³⁸
29.9	17.121 ³³³	17.68 ⁷⁵	13.871 ²⁸¹	38.79 ²⁷	51.997 ²⁸⁷	13.74 ⁴³
Mar. 10.8	17.454 ³⁴⁷	16.93 ⁶⁹	14.152 ²⁹⁵	38.52 ³⁶	52.284 ³⁰¹	13.31 ⁴⁹
20.8	17.801 ³⁵⁸	16.24 ⁶⁰	14.447 ³⁰⁴	38.16 ⁴⁵	52.585 ³¹²	12.82 ⁵⁵
30.8	18.159 ³⁶³	15.64 ⁵⁰	14.751 ³⁰⁹	37.71 ⁵⁴	52.897 ³¹⁹	12.27 ⁵⁸
Apr. 9.8	18.522 ³⁶⁵	15.14 ⁴⁰	15.060 ³¹¹	37.17 ⁶⁰	53.216 ³²¹	11.69 ⁶⁰
19.7	18.887 ³⁵⁹	14.74 ²⁷	15.371 ³⁰⁷	36.57 ⁶⁴	53.537 ³¹⁸	11.09 ⁶⁰
29.7	19.246 ³⁴⁹	14.47 ¹⁴	15.678 ²⁹⁸	35.93 ⁶⁴	53.855 ³¹⁰	10.49 ⁵⁶
May 9.7	19.595 ³³²	14.33 ³	15.976 ²⁸⁵	35.29 ⁶²	54.165 ²⁹⁷	9.93 ⁵¹
19.6	19.927 ³⁰⁸	14.36 ¹⁹	16.261 ²⁶⁵	34.67 ⁵⁸	54.462 ²⁷⁷	9.42 ⁴²
29.6	20.235 ²⁷⁶	14.55 ³⁶	16.526 ²³⁸	34.09 ⁵⁰	54.739 ²⁵¹	9.00 ³²
June 8.6	20.511 ²³⁹	14.91 ⁵³	16.764 ²⁰⁷	33.59 ⁴⁰	54.990 ²¹⁹	8.68 ¹⁹
18.6	20.750 ¹⁹⁶	15.44 ⁶⁹	16.971 ¹⁶⁹	33.19 ²⁹	55.209 ¹⁸¹	8.49 ⁷
28.5	20.946 ¹⁴⁶	16.13 ⁸²	17.140 ¹²⁸	32.90 ¹⁷	55.390 ¹³⁸	8.42 ⁶
July 8.5	21.092 ⁹⁵	16.95 ⁹⁴	17.268 ⁸³	32.73 ⁵	55.528 ⁹²	8.48 ¹⁹
18.5	21.187 ³⁹	17.89 ¹⁰¹	17.351 ³⁷	32.68 ⁷	55.620 ⁴³	8.67 ³⁰
28.5	21.226 ¹⁵	18.90 ¹⁰⁵	17.388 ¹⁰	32.75 ¹⁶	55.663 ⁴	8.97 ³⁹
Aug. 7.4	21.211 ⁶⁸	19.95 ¹⁰⁶	17.378 ⁵⁴	32.91 ²⁴	55.659 ⁵²	9.36 ⁴⁶
17.4	21.143 ¹¹⁷	21.01 ¹⁰⁰	17.324 ⁹⁷	33.15 ²⁹	55.607 ⁹⁴	9.82 ⁴⁹
27.4	21.026 ¹⁵⁸	22.01 ⁹⁰	17.227 ¹³¹	33.44 ³³	55.513 ¹³²	10.31 ⁵⁰
Sept. 6.3	20.868 ¹⁹¹	22.91 ⁷⁶	17.096 ¹⁶⁰	33.77 ³³	55.381 ¹⁶³	10.81 ⁴⁷
16.3	20.677 ²¹⁴	23.67 ⁵⁹	16.936 ¹⁷⁹	34.10 ³²	55.218 ¹⁸²	11.28 ⁴²
26.3	20.463 ²²⁵	24.26 ³⁹	16.757 ¹⁸⁸	34.42 ²⁹	55.036 ¹⁹³	11.70 ³⁴
Oct. 6.3	20.238 ²²³	24.65 ¹⁷	16.569 ¹⁸⁶	34.71 ²⁵	54.843 ¹⁹³	12.04 ²⁶
16.2	20.015 ²⁰⁹	24.82 ⁵	16.383 ¹⁷⁴	34.96 ¹⁹	54.650 ¹⁸¹	12.30 ¹⁶
26.2	19.806 ¹⁸⁴	24.77 ²⁸	16.209 ¹⁵²	35.15 ¹⁵	54.469 ¹⁵⁸	12.46 ⁷
Nov. 5.2	19.622 ¹⁴⁷	24.49 ⁴⁷	16.057 ¹²¹	35.30 ¹¹	54.311 ¹²⁹	12.53 ²
15.2	19.475 ¹⁰³	24.02 ⁶⁵	15.936 ⁸³	35.41 ⁸	54.182 ⁹⁰	12.51 ⁸
25.1	19.372 ⁵²	23.37 ⁷⁹	15.853 ⁴¹	35.49 ⁶	54.092 ⁴⁶	12.43 ¹⁵
Dec. 5.1	19.320 ²	22.58 ⁸⁸	15.812 ⁵	35.55 ⁶	54.046 ¹	12.28 ¹⁷
15.1	19.322 ⁵⁵	21.70 ⁹⁶	15.817 ⁴⁹	35.61 ⁶	54.045 ⁴⁶	12.11 ²¹
25.0	19.377 ¹⁰⁸	20.74 ⁹⁹	15.866 ⁹⁴	35.67 ⁶	54.091 ⁹¹	11.90 ²²
35.0	19.485	19.75	15.960	35.73	54.182	11.68
Mean Place	18.135	28.45	14.692	44.58	52.887	20.61
Sec δ , Tan δ	1.269	-0.782	1.072	-0.387	1.107	-0.475
L α , L δ	+0.02	+0.1	+0.01	+0.1	+0.01	+0.1
ω α , ω δ	+0.01	-1.0	+0.01	-1.0	+0.01	-1.0
AUTHORITY	A. E.		A. E.			

APPARENT PLACES OF STARS, 1924. 403

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	♂ Draconis. Mag. 3.2			♂ Aquilæ. Mag. 5.1			♂ Aquilæ. Mag. 3.4					
	R. A.		Dec. N.	R. A.		Dec. N.	R. A.		Dec. N.			
	^h 19	^m 12	[°] 67	['] 31	^h 19	^m 14	[°] 11	['] 27	^h 19	^m 21	[°] 2	['] 57
Jan.	1.0	29.49	3	50.21	13.222	82	33.05	195	38.246	82	49.85	146
	11.0	29.46	8	46.66	13.304	119	31.10	193	38.328	119	48.39	144
	21.0	29.54	19	43.09	13.423	154	29.17	183	38.447	152	46.95	136
	30.9	29.73	29	39.62	13.577	184	27.34	165	38.599	180	45.59	121
Feb.	9.9	30.02	38	36.39	13.761	210	25.69	141	38.779	207	44.38	101
	19.9	30.40	46	33.51	13.971	232	24.28	110	38.986	229	43.37	76
	29.9	30.86	52	31.10	14.203	252	23.18	74	39.215	248	42.61	46
Mar.	10.8	31.38	57	29.23	14.455	267	22.44	35	39.463	264	42.15	14
	20.8	31.95	59	27.98	14.722	278	22.09	6	39.727	275	42.01	19
	30.8	32.54	61	27.38	15.000	284	22.15	46	40.002	282	42.20	51
Apr.	9.8	33.15	60	27.44	15.284	286	22.61	85	40.284	287	42.71	82
	19.7	33.75	58	28.16	15.570	284	23.46	118	40.571	286	43.53	109
	29.7	34.33	54	29.49	15.854	275	24.64	149	40.857	278	44.62	133
May	9.7	34.87	48	31.37	16.129	262	26.13	172	41.135	267	45.95	149
	19.6	35.35	40	33.74	16.391	242	27.85	191	41.402	249	47.44	163
	29.6	35.75	33	36.52	16.633	216	29.76	202	41.651	226	49.07	169
June	8.6	36.08	24	39.60	16.849	185	31.78	207	41.877	196	50.76	170
	18.6	36.32	15	42.90	17.034	150	33.85	207	42.073	162	52.46	167
	28.5	36.47	4	46.33	17.184	110	35.92	200	42.235	124	54.13	159
July	8.5	36.51	5	49.80	17.294	69	37.92	189	42.359	82	55.72	148
	18.5	36.46	15	53.21	17.363	24	39.81	174	42.441	39	57.20	133
	28.5	36.31	25	56.49	17.387	19	41.55	155	42.480	6	58.53	115
Aug.	7.4	36.06	34	59.56	17.368	61	43.10	133	42.474	46	59.68	96
	17.4	35.72	41	62.35	17.307	99	44.43	110	42.428	86	60.64	77
	27.4	35.31	48	64.79	17.208	133	45.53	84	42.342	120	61.41	57
Sept.	6.3	34.83	53	66.85	17.075	158	46.37	58	42.222	147	61.98	36
	16.3	34.30	58	68.46	16.917	178	46.95	32	42.075	167	62.34	16
	26.3	33.72	60	69.59	16.739	187	47.27	3	41.908	178	62.50	5
Oct.	6.3	33.12	61	70.20	16.552	187	47.30	24	41.730	178	62.45	24
	16.2	32.51	59	70.28	16.365	177	47.06	51	41.552	170	62.21	44
	26.2	31.92	57	69.81	16.188	159	46.55	78	41.382	153	61.77	63
Nov.	5.2	31.35	52	68.79	16.029	133	45.77	105	41.229	127	61.14	82
	15.2	30.83	46	67.22	15.896	101	44.72	130	41.102	95	60.32	100
	25.1	30.37	38	65.14	15.795	63	43.42	153	41.007	60	59.32	116
Dec.	5.1	29.99	30	62.60	15.732	23	41.89	171	40.947	19	58.16	130
	15.1	29.69	20	59.65	15.709	19	40.18	186	40.928	20	56.86	140
	25.0	29.49	10	56.37	15.728	59	38.32	195	40.948	60	55.46	146
	35.0	29.39		52.89	15.787		36.37		41.008		54.00	
Mean Place	32.56		40.14		14.947		26.16		39.993		43.63	
Sec δ, Tan δ	2.616		+2.417		1.020		+0.203		1.001		+0.052	
L α, L δ	-0.06		+0.1		-0.01		+0.1		0.00		+0.1	
ω α, ω δ	-0.05		-1.0		0.00		-0.9		0.00		-0.9	
AUTHORITY	A. E.				A. E.				A. E.			

404 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	59 G. Telescopii. Mag. 5.6		6 Vulpeculæ. Mag. 4.6		β Cygni. Mag. 3.2	
	R. A.	Dec. S.	R. A.	Dec. N.	R. A.	Dec. N.
	^h ^m 19 21	[°] ['] 54 28	^h ^m 19 25	[°] ['] 24 30	^h ^m 19 27	[°] ['] 27 47
Jan. 1.0	39.029 ¹³⁴	41.96 ²⁰¹	30.834 ⁵⁸	43.93 ²⁵⁴	37.636 ⁵²	64.75 ²⁶⁷
11.0	39.163 ¹⁹⁸	39.95 ²⁰¹	30.892 ⁹⁸	41.39 ²⁵⁴	37.688 ⁹⁵	62.08 ²⁶⁷
21.0	39.361 ²⁵⁸	37.94 ¹⁹⁶	30.990 ¹³⁷	38.85 ²⁴⁵	37.783 ¹³⁴	59.41 ²⁵⁸
30.9	39.619 ³⁰⁹	35.98 ¹⁸⁶	31.127 ¹⁷²	36.40 ²²⁴	37.917 ¹⁷⁰	56.83 ²³⁸
Feb. 9.9	39.928 ³⁵⁵	34.12 ¹⁷³	31.299 ²⁰³	34.16 ¹⁹⁷	38.087 ²⁰⁴	54.45 ²⁰⁸
19.9	40.283 ³⁹³	32.39 ¹⁵⁸	31.502 ²³¹	32.19 ¹⁵⁹	38.291 ²³³	52.37 ¹⁷²
29.9	40.676 ⁴²³	30.81 ¹³⁹	31.733 ²⁵³	30.60 ¹¹⁷	38.524 ²⁵⁷	50.65 ¹²⁶
Mar. 10.8	41.099 ⁴⁴⁹	29.42 ¹¹⁷	31.986 ²⁷³	29.43 ⁶⁹	38.781 ²⁷⁷	49.39 ⁷⁷
20.8	41.548 ⁴⁶⁶	28.25 ⁹⁵	32.259 ²⁸⁷	28.74 ¹⁹	39.058 ²⁹²	48.62 ²⁵
30.8	42.014 ⁴⁷⁸	27.30 ⁷⁰	32.546 ²⁹⁶	28.55 ³²	39.350 ³⁰³	48.37 ²⁷
Apr. 9.8	42.492 ⁴⁸¹	26.60 ⁴³	32.842 ³⁰⁰	28.87 ⁸¹	39.653 ³⁰⁵	48.64 ⁷⁹
19.7	42.973 ⁴⁷⁸	26.17 ¹⁶	33.142 ²⁹⁷	29.68 ¹²⁶	39.958 ³⁰⁴	49.43 ¹²⁶
29.7	43.451 ⁴⁶⁵	26.01 ¹³	33.439 ²⁸⁹	30.94 ¹⁶⁶	40.262 ²⁹⁴	50.69 ¹⁶⁸
May 9.7	43.916 ⁴⁴⁵	26.14 ⁴²	33.728 ²⁷⁵	32.60 ¹⁹⁹	40.556 ²⁸⁰	52.37 ²⁰⁴
19.6	44.361 ⁴¹⁸	26.56 ⁷¹	34.003 ²⁵³	34.59 ²²⁷	40.836 ²⁵⁷	54.41 ²³⁵
29.6	44.779 ³⁷¹	27.27 ⁹⁸	34.256 ²²⁶	36.86 ²⁴⁶	41.093 ²²⁹	56.76 ²⁵⁵
June 8.6	45.150 ³²⁶	28.25 ¹²⁴	34.482 ¹⁹²	39.32 ²⁵⁷	41.322 ¹⁹⁵	59.31 ²⁶⁹
18.6	45.476 ²⁷⁰	29.49 ¹⁴⁶	34.674 ¹⁵⁴	41.89 ²⁶³	41.517 ¹⁵⁶	62.00 ²⁷⁴
28.5	45.746 ²⁰⁵	30.95 ¹⁶⁵	34.828 ¹¹²	44.52 ²⁶⁰	41.673 ¹¹²	64.74 ²⁷³
July 8.5	45.951 ¹³⁶	32.60 ¹⁷⁸	34.940 ⁶⁸	47.12 ²⁵¹	41.785 ⁶⁷	67.47 ²⁶⁶
18.5	46.087 ⁶³	34.38 ¹⁸⁷	35.008 ²¹	49.63 ²³⁶	41.852 ¹⁹	70.13 ²⁵⁰
28.5	46.150 ¹⁰	36.25 ¹⁸⁷	35.029 ²⁵	51.99 ²¹⁷	41.871 ²⁸	72.63 ²³¹
Aug. 7.4	46.140 ⁸¹	38.12 ¹⁸⁴	35.004 ⁷⁰	54.16 ¹⁹²	41.843 ⁷³	74.94 ²⁰⁶
17.4	46.059 ¹⁴⁸	39.96 ¹⁷¹	34.934 ¹¹⁰	56.08 ¹⁶⁴	41.770 ¹¹⁵	77.00 ¹⁷⁸
27.4	45.911 ²⁰⁸	41.67 ¹⁵³	34.824 ¹⁴⁷	57.72 ¹³³	41.655 ¹⁵¹	78.78 ¹⁴⁵
Sept. 6.3	45.703 ²⁵⁵	43.20 ¹²⁹	34.677 ¹⁷⁴	59.05 ¹⁰⁰	41.504 ¹⁸²	80.23 ¹¹¹
16.3	45.448 ²⁹¹	44.49 ⁹⁷	34.503 ¹⁹⁷	60.05 ⁶⁵	41.322 ²⁰²	81.34 ⁷³
26.3	45.157 ³¹²	45.46 ⁶⁴	34.306 ²⁰⁷	60.70 ²⁸	41.120 ²¹⁶	82.07 ³⁴
Oct. 6.3	44.845 ³¹⁶	46.10 ²⁵	34.099 ²¹⁰	60.98 ¹⁰	40.904 ²¹⁸	82.41 ⁵
16.2	44.529 ³⁰³	46.35 ¹³	33.889 ²⁰³	60.88 ⁴⁷	40.686 ²¹¹	82.36 ⁴⁶
26.2	44.226 ²⁷⁵	46.22 ⁵¹	33.686 ¹⁸⁶	60.41 ⁸⁶	40.475 ¹⁹⁶	81.90 ⁸⁶
Nov. 5.2	43.951 ²³³	45.71 ⁸⁸	33.500 ¹⁶²	59.55 ¹²³	40.279 ¹⁷¹	81.04 ¹²⁵
15.2	43.718 ¹⁷⁹	44.83 ¹²⁰	33.338 ¹³⁰	58.32 ¹⁵⁸	40.108 ¹³⁹	79.79 ¹⁶³
25.1	43.539 ¹¹⁶	43.63 ¹⁴⁹	33.208 ⁹²	56.74 ¹⁹⁰	39.969 ¹⁰²	78.16 ¹⁹⁶
Dec. 5.1	43.423 ⁴⁷	42.14 ¹⁶⁹	33.116 ⁵³	54.84 ²¹⁶	39.867 ⁶²	76.20 ²²⁶
15.1	43.376 ²⁵	40.45 ¹⁸⁶	33.063 ¹⁰	52.68 ²³⁸	39.805 ¹⁷	73.94 ²⁴⁸
25.0	43.401 ⁹⁵	38.59 ¹⁹⁶	33.053 ³³	50.30 ²⁵¹	39.788 ²⁶	71.46 ²⁶⁴
35.0	43.496	36.63	33.086	47.79	39.814	68.82
Mean Place	42.290	45.27	32.546	36.08	39.358	56.62
Sec δ, Tan δ	1.721	-1.401	1.099	+0.456	1.130	+0.527
L α, L δ	+0.03	+0.1	-0.01	+0.1	-0.01	+0.1
ω α, ω δ	+0.03	-0.9	-0.01	-0.9	-0.01	-0.9
AUTHORITY	A. E.					

APPARENT PLACES OF STARS, 1924. 405

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	μ Aquilæ. Mag. 4·7		λ Sagittarii. Mag. 4·7		54 Sagittarii. Mag. 5·5	
	R. A.	Dec. N.	R. A.	Dec. S.	R. A.	Dec. S.
	^h ^m 19 30	[°] ['] 7 12	^h ^m 19 32	[°] ['] 25 2	^h ^m 19 36	[°] ['] 16 27
Jan. 1·0	20·919 ₇₀	66·29 ₁₆₈	2·949 ₉₂	65·85 ₂₈	20·313 ₈₂	63·30 ₂₅
11·0	20·989 ₁₀₇	64·61 ₁₆₆	3·041 ₁₃₁	65·57 ₃₁	20·395 ₁₁₉	63·55 ₂₂
21·0	21·096 ₁₄₀	62·95 ₁₅₈	3·172 ₁₆₈	65·26 ₃₄	20·514 ₁₅₃	63·77 ₁₇
31·0	21·236 ₁₇₁	61·37 ₁₄₃	3·340 ₂₀₀	64·92 ₃₉	20·667 ₁₈₃	63·94 ₉
Feb. 9·9	21·407 ₁₉₈	59·94 ₁₂₁	3·540 ₂₂₉	64·53 ₄₅	20·850 ₂₁₁	64·03 ₃
19·9	21·605 ₂₂₁	58·73 ₉₃	3·769 ₂₅₃	64·08 ₅₁	21·061 ₂₃₄	64·00 ₁₄
29·9	21·826 ₂₄₂	57·80 ₆₂	4·022 ₂₇₃	63·57 ₅₈	21·295 ₂₅₅	63·86 ₂₈
Mar. 10·8	22·068 ₂₅₉	57·18 ₂₆	4·295 ₂₉₁	62·99 ₆₄	21·550 ₂₇₂	63·58 ₄₃
20·8	22·327 ₂₇₂	56·92 ₁₁	4·586 ₃₀₅	62·35 ₇₀	21·822 ₂₈₆	63·15 ₅₈
30·8	22·599 ₂₈₂	57·03 ₄₈	4·891 ₃₁₅	61·65 ₇₄	22·108 ₂₉₆	62·57 ₇₁
Apr. 9·8	22·881 ₂₈₇	57·51 ₈₂	5·206 ₃₂₁	60·91 ₇₇	22·404 ₃₀₃	61·86 ₈₃
19·7	23·168 ₂₈₆	58·33 ₁₁₃	5·527 ₃₂₁	60·14 ₇₆	22·707 ₃₀₅	61·03 ₉₀
29·7	23·454 ₂₈₂	59·46 ₁₄₀	5·848 ₃₁₇	59·38 ₇₃	23·012 ₃₀₁	60·13 ₉₆
May 9·7	23·736 ₂₇₀	60·86 ₁₆₂	6·165 ₃₀₇	58·65 ₆₇	23·313 ₂₉₂	59·17 ₉₇
19·7	24·006 ₂₅₃	62·48 ₁₇₇	6·472 ₂₈₉	57·98 ₅₈	23·605 ₂₇₆	58·20 ₉₅
29·6	24·259 ₂₃₀	64·25 ₁₈₇	6·761 ₂₆₆	57·40 ₄₆	23·881 ₂₅₅	57·25 ₈₈
June 8·6	24·489 ₂₀₁	66·12 ₁₉₁	7·027 ₂₃₆	56·94 ₃₃	24·136 ₂₂₆	56·37 ₇₉
18·6	24·690 ₁₆₇	68·03 ₁₉₀	7·263 ₂₀₀	56·61 ₁₉	24·362 ₁₉₂	55·58 ₆₉
28·5	24·857 ₁₂₉	69·93 ₁₈₂	7·463 ₁₅₈	56·42 ₃	24·554 ₁₅₃	54·89 ₅₅
July 8·5	24·986 ₈₇	71·75 ₁₇₂	7·621 ₁₁₃	56·39 ₁₂	24·707 ₁₁₀	54·34 ₄₀
18·5	25·073 ₄₃	73·47 ₁₅₆	7·734 ₆₅	56·51 ₂₅	24·817 ₆₄	53·94 ₂₅
28·5	25·116 ₀	75·03 ₁₃₉	7·799 ₁₆	56·76 ₃₇	24·881 ₁₈	53·69 ₁₁
Aug. 7·4	25·116 ₄₄	76·42 ₁₁₉	7·815 ₃₂	57·13 ₄₅	24·899 ₂₈	53·58 ₁
17·4	25·072 ₈₁	77·61 ₉₇	7·783 ₇₇	57·58 ₅₃	24·871 ₇₀	53·59 ₁₁
27·4	24·989 ₁₁₈	78·58 ₇₄	7·706 ₁₁₆	58·11 ₅₄	24·801 ₁₀₉	53·70 ₂₁
Sept. 6·4	24·871 ₁₄₆	79·32 ₅₂	7·590 ₁₅₀	58·65 ₅₅	24·692 ₁₃₉	53·91 ₂₈
16·3	24·725 ₁₆₇	79·84 ₂₇	7·440 ₁₇₃	59·20 ₅₁	24·553 ₁₆₃	54·19 ₃₁
26·3	24·558 ₁₇₈	80·11 ₄	7·267 ₁₈₈	59·71 ₄₅	24·390 ₁₇₆	54·50 ₃₅
Oct. 6·3	24·380 ₁₈₁	80·15 ₂₀	7·079 ₁₉₁	60·16 ₃₆	24·214 ₁₈₀	54·85 ₃₄
16·2	24·199 ₁₇₄	79·95 ₄₄	6·888 ₁₈₃	60·52 ₂₇	24·034 ₁₇₃	55·19 ₃₄
26·2	24·025 ₁₅₈	79·51 ₆₇	6·705 ₁₆₅	60·79 ₁₇	23·861 ₁₅₇	55·53 ₃₄
Nov. 5·2	23·867 ₁₃₅	78·84 ₈₉	6·540 ₁₃₉	60·96 ₈	23·704 ₁₃₂	55·87 ₃₂
15·2	23·732 ₁₀₄	77·95 ₁₁₁	6·401 ₁₀₄	61·04 ₁	23·572 ₁₀₁	56·19 ₃₁
25·1	23·628 ₆₈	76·84 ₁₃₀	6·297 ₆₄	61·03 ₉	23·471 ₆₃	56·50 ₃₂
Dec. 5·1	23·560 ₃₁	75·54 ₁₄₇	6·233 ₂₀	60·94 ₁₅	23·408 ₂₃	56·82 ₃₀
15·1	23·529 ₉	74·07 ₁₅₉	6·213 ₂₄	60·79 ₁₉	23·385 ₁₉	57·12 ₃₀
25·1	23·538 ₄₈	72·48 ₁₆₈	6·237 ₆₈	60·60 ₂₄	23·404 ₅₉	57·42 ₂₉
35·0	23·586	70·80	6·305	60·36	23·463	57·71
Mean Place	22·631	59·89	5·026	69·63	22·235	67·48
Sec δ , Tan δ	1·008	+0·127	1·104	-0·467	1·043	-0·296
L α , L δ	0·00	+0·2	+0·01	+0·2	+0·01	+0·2
ω α , ω δ	0·00	-0·9	+0·01	-0·9	+0·01	-0·9
AUTHORITY	A. E.					

406 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	<i>f</i> Sagittarii. Mag. 5·1			δ Cygni. Mag. 3·0			γ Aquilæ. Mag. 2·8		
	R. A.		Dec. S.	R. A.		Dec. N.	R. A.		Dec. N.
	^h 19	^m 41	[°] 19 56	^h 19	^m 42	[°] 44 56	^h 19	^m 42	[°] 10 25
Jan.	1·0	53·830 ₇₈	38·33 ₃	34·181 ₅	50·19 ₃₁₅	37·103 ₅₅	43·66 ₁₈₁		
	11·0	53·908 ₁₁₆	38·36 ₂	34·186 ₆₀	47·04 ₃₂₂	37·158 ₉₂	41·85 ₁₈₀		
	21·0	54·024 ₁₅₀	38·34 ₇	34·246 ₁₁₃	43·82 ₃₁₆	37·250 ₁₂₇	40·05 ₁₇₂		
	31·0	54·174 ₁₈₃	38·27 ₁₄	34·359 ₁₆₃	40·66 ₂₉₇	37·377 ₁₅₈	38·33 ₁₅₇		
Feb.	9·9	54·357 ₂₀₉	38·13 ₂₂	34·522 ₂₀₉	37·69 ₂₆₈	37·535 ₁₈₆	36·76 ₁₃₅		
	19·9	54·566 ₂₃₅	37·91 ₃₄	34·731 ₂₅₁	35·01 ₂₂₉	37·721 ₂₁₂	35·41 ₁₀₆		
	29·9	54·801 ₂₅₆	37·57 ₄₄	34·982 ₂₈₇	32·72 ₁₈₀	37·933 ₂₃₄	34·35 ₇₃		
Mar.	10·9	55·057 ₂₇₅	37·13 ₅₆	35·269 ₃₁₇	30·92 ₁₂₄	38·167 ₂₅₃	33·62 ₃₅		
	20·8	55·332 ₂₈₉	36·57 ₆₈	35·586 ₃₄₀	29·68 ₆₆	38·420 ₂₆₉	33·27 ₄		
	30·8	55·621 ₃₀₂	35·89 ₇₇	35·926 ₃₅₅	29·02 ₄	38·689 ₂₈₁	33·31 ₄₂		
Apr.	9·8	55·923 ₃₀₈	35·12 ₈₅	36·281 ₃₆₁	28·98 ₅₇	38·970 ₂₈₇	33·73 ₈₀		
	19·7	56·231 ₃₁₁	34·27 ₉₀	36·642 ₃₆₀	29·55 ₁₁₄	39·257 ₂₈₈	34·53 ₁₁₅		
	29·7	56·542 ₃₀₈	33·37 ₉₂	37·002 ₃₄₉	30·69 ₁₆₇	39·545 ₂₈₅	35·68 ₁₄₅		
May	9·7	56·850 ₃₀₀	32·45 ₈₉	37·351 ₃₂₉	32·36 ₂₁₃	39·830 ₂₇₆	37·13 ₁₆₉		
	19·7	57·150 ₂₈₅	31·56 ₈₄	37·680 ₃₀₁	34·49 ₂₅₃	40·106 ₂₅₉	38·82 ₁₈₈		
	29·6	57·435 ₂₆₃	30·72 ₇₆	37·981 ₂₆₅	37·02 ₂₈₄	40·365 ₂₃₇	40·70 ₂₀₀		
June	8·6	57·698 ₂₃₅	29·96 ₆₄	38·246 ₂₂₃	39·86 ₃₀₇	40·602 ₂₀₉	42·70 ₂₀₇		
	18·6	57·933 ₂₀₁	29·32 ₅₁	38·469 ₁₇₄	42·93 ₃₁₉	40·811 ₁₇₅	44·77 ₂₀₇		
	28·6	58·134 ₁₆₁	28·81 ₃₇	38·643 ₁₂₂	46·12 ₃₂₆	40·986 ₁₃₇	46·84 ₂₀₁		
July	8·5	58·295 ₁₁₆	28·44 ₂₁	38·765 ₆₆	49·38 ₃₂₃	41·123 ₉₆	48·85 ₁₉₂		
	18·5	58·411 ₇₃	28·23 ₆	38·831 ₈	52·61 ₃₁₂	41·219 ₅₁	50·77 ₁₇₇		
	28·5	58·484 ₂₄	28·17 ₇	38·839 ₄₉	55·73 ₂₉₄	41·270 ₈	52·54 ₁₆₀		
Aug.	7·4	58·508 ₂₃	28·24 ₂₀	38·790 ₁₀₃	58·67 ₂₇₀	41·278 ₃₆	54·14 ₁₃₉		
	17·4	58·485 ₆₆	28·44 ₂₉	38·687 ₁₅₃	61·37 ₂₄₀	41·242 ₇₆	55·53 ₁₁₆		
	27·4	58·419 ₁₀₇	28·73 ₃₇	38·534 ₁₉₈	63·77 ₂₀₄	41·166 ₁₁₃	56·69 ₉₁		
Sept.	6·4	58·312 ₁₃₉	29·10 ₄₀	38·336 ₂₃₆	65·81 ₁₆₆	41·053 ₁₄₂	57·60 ₆₆		
	16·3	58·173 ₁₆₃	29·50 ₄₃	38·100 ₂₆₃	67·47 ₁₂₂	40·911 ₁₆₅	58·26 ₄₁		
	26·3	58·010 ₁₇₈	29·93 ₄₁	37·837 ₂₈₂	68·69 ₇₇	40·746 ₁₇₈	58·67 ₁₄		
Oct.	6·3	57·832 ₁₈₃	30·34 ₃₉	37·555 ₂₉₁	69·46 ₂₈	40·568 ₁₈₂	58·81 ₁₃		
	16·3	57·649 ₁₇₈	30·73 ₃₄	37·264 ₂₈₆	69·74 ₂₂	40·386 ₁₇₈	58·68 ₃₉		
	26·2	57·471 ₁₆₂	31·07 ₃₀	36·978 ₂₇₄	69·52 ₇₂	40·208 ₁₆₄	58·29 ₆₅		
Nov.	5·2	57·309 ₁₃₇	31·37 ₂₅	36·704 ₂₅₀	68·80 ₁₂₃	40·044 ₁₄₃	57·64 ₉₀		
	15·2	57·172 ₁₀₆	31·62 ₂₀	36·454 ₂₁₇	67·57 ₁₇₀	39·901 ₁₁₄	56·74 ₁₁₄		
	25·1	57·066 ₆₈	31·82 ₁₆	36·237 ₁₇₇	65·87 ₂₁₄	39·787 ₈₁	55·60 ₁₃₆		
Dec.	5·1	56·998 ₂₈	31·98 ₁₃	36·060 ₁₃₁	63·73 ₂₅₃	39·706 ₄₄	54·24 ₁₅₅		
	15·1	56·970 ₁₃	32·11 ₁₀	35·929 ₈₁	61·20 ₂₈₅	39·662 ₆	52·69 ₁₇₀		
	25·1	56·983 ₅₅	32·21 ₇	35·848 ₂₈	58·35 ₃₀₈	39·656 ₃₄	50·99 ₁₇₉		
	35·0	57·038	32·28	35·820	55·27	39·690	49·20		
Mean Place	55·802		41·92	36·029		40·22	38·781		37·14
Sec δ , Tan δ	1·064		−0·363	1·413		+0·998	1·017		+0·184
$L \alpha, L \delta$	+0·01		+0·2	−0·02		+0·2	0·00		+0·2
$\omega \alpha, \omega \delta$	+0·01		−0·9	−0·03		−0·9	−0·01		−0·9
AUTHORITY				A. E.			A. E.		

APPARENT PLACES OF STARS, 1924. 407

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	α Aquilæ. Mag. 0.9		ι Sagittari. Mag. 4.2		β Aquilæ. Mag. 3.9	
	R. A.	Dec. N.	R. A.	Dec. S.	R. A.	Dec. N.
	^h 19 47	^m 8 39	^h 19 49	^m 42 3	^h 19 51	^m 6 12
Jan. 1.0	2.834 ₅₆	65.50 ₁₆₉	58.639 ₈₀	68.43 ₁₃₄	33.124 ₅₀	63.18 ₁₅₇
11.0	2.890 ₉₂	63.81 ₁₆₈	58.719 ₁₃₀	67.09 ₁₄₁	33.174 ₈₇	61.61 ₁₅₆
21.0	2.982 ₁₂₇	62.13 ₁₅₉	58.849 ₁₇₅	65.68 ₁₄₅	33.261 ₁₂₀	60.05 ₁₄₈
31.0	3.109 ₁₅₈	60.54 ₁₄₅	59.024 ₂₁₇	64.23 ₁₄₄	33.381 ₁₅₁	58.57 ₁₃₄
Feb. 9.9	3.267 ₁₈₆	59.09 ₁₂₃	59.241 ₂₅₃	62.79 ₁₄₃	33.532 ₁₈₀	57.23 ₁₁₅
19.9	3.453 ₂₁₁	57.86 ₉₆	59.494 ₂₈₇	61.36 ₁₃₉	33.712 ₂₀₅	56.08 ₈₈
29.9	3.664 ₂₃₄	56.90 ₆₃	59.781 ₃₁₄	59.97 ₁₃₂	33.917 ₂₂₈	55.20 ₅₈
Mar. 10.9	3.898 ₂₅₃	56.27 ₂₇	60.095 ₃₃₈	58.65 ₁₂₄	34.145 ₂₄₈	54.62 ₂₄
20.8	4.151 ₂₆₉	56.00 ₁₀	60.433 ₃₅₈	57.41 ₁₁₅	34.393 ₂₆₅	54.38 ₁₁
30.8	4.420 ₂₈₀	56.10 ₄₇	60.791 ₃₇₃	56.26 ₁₀₂	34.658 ₂₇₇	54.49 ₄₇
Apr. 9.8	4.700 ₂₈₇	56.57 ₈₄	61.164 ₃₈₃	55.24 ₈₈	34.935 ₂₈₆	54.96 ₈₀
19.7	4.987 ₂₈₉	57.41 ₁₁₆	61.547 ₃₈₇	54.36 ₇₁	35.221 ₂₈₉	55.76 ₁₁₂
29.7	5.276 ₂₈₇	58.57 ₁₄₅	61.934 ₃₈₄	53.65 ₅₁	35.510 ₂₈₇	56.88 ₁₃₇
May 9.7	5.563 ₂₇₆	60.02 ₁₆₈	62.318 ₃₇₅	53.14 ₂₉	35.797 ₂₇₉	58.25 ₁₅₉
19.7	5.839 ₂₆₂	61.70 ₁₈₅	62.693 ₃₅₆	52.85 ₆	36.076 ₂₆₅	59.84 ₁₇₅
29.6	6.101 ₂₃₉	63.55 ₁₉₆	63.049 ₃₃₁	52.79 ₁₇	36.341 ₂₄₄	61.59 ₁₈₅
June 8.6	6.340 ₂₁₂	65.51 ₂₀₂	63.380 ₂₉₆	52.96 ₄₂	36.585 ₂₁₇	63.44 ₁₉₀
18.6	6.552 ₁₇₈	67.53 ₂₀₁	63.676 ₂₅₅	53.38 ₆₄	36.802 ₁₈₅	65.34 ₁₈₈
28.6	6.730 ₁₄₁	69.54 ₁₉₅	63.931 ₂₀₆	54.02 ₈₆	36.987 ₁₄₈	67.22 ₁₈₂
July 8.5	6.871 ₉₉	71.49 ₁₈₄	64.137 ₁₅₂	54.88 ₁₀₄	37.135 ₁₀₇	69.04 ₁₇₁
18.5	6.970 ₅₆	73.33 ₁₇₀	64.289 ₉₆	55.92 ₁₁₉	37.242 ₆₃	70.75 ₁₅₇
28.5	7.026 ₁₁	75.03 ₁₅₂	64.385 ₃₅	57.11 ₁₃₀	37.305 ₁₉	72.32 ₁₃₉
Aug. 7.4	7.037 ₃₁	76.55 ₁₃₂	64.420 ₂₂	58.41 ₁₃₅	37.324 ₂₄	73.71 ₁₁₉
17.4	7.006 ₇₃	77.87 ₁₀₉	64.398 ₇₉	59.76 ₁₃₅	37.300 ₆₆	74.90 ₉₈
27.4	6.933 ₁₀₈	78.96 ₈₅	64.319 ₁₃₀	61.11 ₁₂₉	37.234 ₁₀₂	75.88 ₇₆
Sept. 6.4	6.825 ₁₃₉	79.81 ₆₁	64.189 ₁₇₂	62.40 ₁₁₇	37.132 ₁₃₃	76.64 ₅₃
16.3	6.686 ₁₆₀	80.42 ₃₆	64.017 ₂₀₅	63.57 ₁₀₁	36.999 ₁₅₆	77.17 ₃₀
26.3	6.526 ₁₇₅	80.78 ₁₁	63.812 ₂₂₇	64.58 ₇₉	36.843 ₁₇₁	77.47 ₇
Oct. 6.3	6.351 ₁₇₉	80.89 ₁₄	63.585 ₂₃₆	65.37 ₅₄	36.672 ₁₇₇	77.54 ₁₅
16.3	6.172 ₁₇₅	80.75 ₃₈	63.349 ₂₃₁	65.91 ₂₈	36.495 ₁₇₄	77.39 ₃₈
26.2	5.997 ₁₆₁	80.37 ₆₃	63.118 ₂₁₆	66.19 ₂	36.321 ₁₆₁	77.01 ₆₀
Nov. 5.2	5.836 ₁₄₀	79.74 ₈₆	62.902 ₁₈₇	66.17 ₂₉	36.160 ₁₄₁	76.41 ₈₂
15.2	5.696 ₁₁₂	78.88 ₁₀₈	62.715 ₁₅₀	65.88 ₅₅	36.019 ₁₁₄	75.59 ₁₀₁
25.1	5.584 ₇₉	77.80 ₁₂₉	62.565 ₁₀₃	65.33 ₇₈	35.905 ₈₁	74.58 ₁₂₀
Dec. 5.1	5.505 ₄₂	76.51 ₁₄₅	62.462 ₅₄	64.55 ₉₉	35.824 ₄₆	73.38 ₁₃₆
15.1	5.463 ₄	75.06 ₁₆₀	62.408 ₂	63.56 ₁₁₅	35.778 ₉	72.02 ₁₄₈
25.1	5.459 ₃₄	73.46 ₁₆₇	62.406 ₅₂	62.41 ₁₂₇	35.769 ₂₉	70.54 ₁₅₅
35.0	5.493	71.79	62.458	61.14	35.798	68.99
Mean Place	4.513	59.34	61.204	69.71	34.802	57.27
Sec δ , Tan δ	1.012	+0.152	1.347	-0.903	1.006	+0.109
L α , L δ	0.00	+0.2	+0.02	+0.2	0.00	+0.2
ω α , ω δ	0.00	-0.9	+0.03	-0.9	0.00	-0.9
AUTHORITY	A. E.				A. E.	

408 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	g Sagittarii. Mag. 5.1		c Sagittarii. Mag. 4.6		δ Pavonis, Mag. 3.6	
	R. A.	Dec. S.	R. A.	Dec. S.	R. A.	Dec. S.
	^h ^m 19 53	[°] ['] 15 41	^h ^m 19 57	[°] ['] 27 55	^h ^m 20 1	[°] ['] 66 22
Jan. 1.1	36.607 ⁶⁴	35.08 ²⁷	57.133 ⁶⁵	18.60 ⁵⁰	12.23 ⁷	39.46 ²⁶⁰
11.0	36.671 ¹⁰⁰	35.35 ²¹	57.198 ¹⁰⁵	18.10 ⁵⁶	12.30 ¹⁶	36.86 ²⁶⁸
21.0	36.771 ¹³⁵	35.56 ¹⁶	57.303 ¹⁴³	17.54 ⁶²	12.46 ²⁶	34.18 ²⁶⁹
31.0	36.906 ¹⁶⁶	35.72 ⁶	57.446 ¹⁷⁸	16.92 ⁶⁹	12.72 ³³	31.49 ²⁶⁴
Feb. 10.0	37.072 ¹⁹⁴	35.78 ⁴	57.624 ²⁰⁸	16.23 ⁷⁴	13.05 ⁴²	28.85 ²⁵²
19.9	37.266 ²¹⁹	35.74 ¹⁹	57.832 ²³⁵	15.49 ⁸¹	13.47 ⁴⁸	26.33 ²³⁵
29.9	37.485 ²⁴²	35.55 ³⁴	58.067 ²⁶¹	14.68 ⁸⁶	13.95 ⁵⁴	23.98 ²¹²
Mar. 10.9	37.727 ²⁶¹	35.21 ⁴⁹	58.328 ²⁸³	13.82 ⁹¹	14.49 ⁵⁹	21.86 ¹⁸⁶
20.8	37.988 ²⁷⁸	34.72 ⁶⁵	58.611 ²⁹⁹	12.91 ⁹⁵	15.08 ⁶²	20.00 ¹⁵⁶
30.8	38.266 ²⁹²	34.07 ⁸⁰	58.910 ³¹⁵	11.96 ⁹⁸	15.70 ⁶⁵	18.44 ¹²²
Apr. 9.8	38.558 ³⁰⁰	33.27 ⁹²	59.225 ³²⁶	10.98 ⁹⁶	16.35 ⁶⁷	17.22 ⁸⁷
19.8	38.858 ³⁰⁴	32.35 ¹⁰⁰	59.551 ³³⁰	10.02 ⁹⁴	17.02 ⁶⁸	16.35 ⁵⁰
29.7	39.162 ³⁰⁴	31.35 ¹⁰⁷	59.881 ³³¹	9.08 ⁸⁸	17.70 ⁶⁷	15.85 ¹¹
May 9.7	39.466 ²⁹⁷	30.28 ¹⁰⁹	60.212 ³²⁴	8.20 ⁷⁸	18.37 ⁶⁶	15.74 ³⁰
19.7	39.763 ²⁸⁵	29.19 ¹⁰⁵	60.536 ³¹⁰	7.42 ⁶⁵	19.03 ⁶²	16.04 ⁶⁸
29.7	40.048 ²⁶⁵	28.14 ¹⁰¹	60.846 ²⁹⁰	6.77 ⁵¹	19.65 ⁵⁷	16.72 ¹⁰⁵
June 8.6	40.313 ²³⁸	27.13 ⁹²	61.136 ²⁶²	6.26 ³⁴	20.22 ⁵¹	17.77 ¹⁴²
18.6	40.551 ²⁰⁵	26.21 ⁷⁹	61.398 ²²⁸	5.92 ¹⁵	20.73 ⁴⁴	19.19 ¹⁷⁴
28.6	40.756 ¹⁶⁷	25.42 ⁶⁵	61.626 ¹⁸⁷	5.77 ³	21.17 ³⁵	20.93 ²⁰²
July 8.5	40.923 ¹²⁶	24.77 ⁵⁰	61.813 ¹⁴²	5.80 ²⁰	21.52 ²⁶	22.95 ²²³
18.5	41.049 ⁸⁰	24.27 ³⁴	61.955 ⁹³	6.00 ³⁷	21.78 ¹⁵	25.18 ²³⁸
28.5	41.129 ³³	23.93 ¹⁸	62.048 ⁴³	6.37 ⁵¹	21.93 ⁶	27.56 ²⁴⁶
Aug. 7.5	41.162 ¹²	23.75 ⁴	62.091 ⁸	6.88 ⁶³	21.99 ⁵	30.02 ²⁴⁶
17.4	41.150 ⁵⁶	23.71 ⁹	62.083 ⁵⁶	7.51 ⁷⁰	21.94 ¹⁵	32.48 ²³⁶
27.4	41.094 ⁹⁶	23.80 ²⁰	62.027 ⁹⁹	8.21 ⁷⁵	21.79 ²⁵	34.84 ²¹⁸
Sept. 6.4	40.998 ¹²⁸	24.00 ²⁷	61.928 ¹³⁶	8.96 ⁷⁴	21.54 ³³	37.02 ¹⁹²
16.4	40.870 ¹⁵⁴	24.27 ³⁴	61.792 ¹⁶⁵	9.70 ⁷⁰	21.21 ³⁹	38.94 ¹⁵⁷
26.3	40.716 ¹⁷⁰	24.61 ³⁸	61.627 ¹⁸⁴	10.40 ⁶²	20.82 ⁴³	40.51 ¹¹⁸
Oct. 6.3	40.546 ¹⁷⁷	24.99 ³⁹	61.443 ¹⁹²	11.02 ⁵²	20.39 ⁴⁶	41.69 ⁷³
16.3	40.369 ¹⁷³	25.38 ³⁹	61.251 ¹⁸⁹	11.54 ³⁹	19.93 ⁴⁷	42.42 ²⁵
26.2	40.196 ¹⁶⁰	25.77 ³⁹	61.062 ¹⁷⁶	11.93 ²⁶	19.46 ⁴⁴	42.67 ²⁶
Nov. 5.2	40.036 ¹³⁸	26.16 ³⁸	60.886 ¹⁵³	12.19 ¹¹	19.02 ⁴¹	42.41 ⁷⁶
15.2	39.898 ¹¹⁰	26.54 ³⁷	60.733 ¹²³	12.30 ²	18.61 ³⁴	41.65 ¹²¹
25.2	39.788 ⁷⁴	26.91 ³⁵	60.610 ⁸⁶	12.28 ¹⁴	18.27 ²⁷	40.44 ¹⁶³
Dec. 5.1	39.714 ³⁷	27.26 ³⁵	60.524 ⁴⁴	12.14 ²⁶	18.00 ¹⁸	38.81 ¹⁹⁹
15.1	39.677 ²	27.61 ³²	60.480 ²	11.88 ³⁶	17.82 ⁹	36.82 ²²⁸
25.1	39.679 ⁴²	27.93 ³¹	60.478 ⁴²	11.52 ⁴³	17.73 ¹	34.54 ²⁵⁰
35.1	39.721	28.24	60.520	11.09	17.74	32.04
Mean Place	38.496	38.44	59.243	20.46	16.88	38.42
Sec δ, Tan δ	1.039	—0.281	1.132	—0.530	2.495	—2.286
L α, L δ	+0.01	+0.2	+0.01	+0.2	+0.05	+0.2
ω α, ω δ	+0.01	—0.9	+0.02	—0.9	+0.08	—0.9
AUTHORITY			A. N.		A. E.	

APPARENT PLACES OF STARS, 1924. 409

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	θ Aquilæ. Mag. 3.4			γ Capricorni. Mag. 6.0			α^2 Capricorni. Mag. 3.8		
	R. A.		Dec. S.	R. A.		Dec. S.	R. A.		Dec. S.
	h m 20 7	° ' " s I 2		h m 20 13	° ' " s 22 2		h m 20 13	° ' " s 12 46	
Jan. 1.1	21.347 ⁴¹	47.93 ¹¹⁰		31.614 ⁴⁶	43.59 ¹⁶		48.545 ⁴²	50.55 ⁴⁰	
11.0	21.388 ⁷⁷	49.03 ¹⁰⁸		31.660 ⁸⁴	43.43 ²³		48.587 ⁷⁸	50.95 ³⁵	
21.0	21.465 ¹⁰⁹	50.11 ¹⁰¹		31.744 ¹¹⁹	43.20 ³¹		48.665 ¹¹²	51.30 ²⁷	
31.0	21.574 ¹⁴⁰	51.12 ⁸⁹		31.863 ¹⁵³	42.89 ³⁹		48.777 ¹⁴³	51.57 ¹⁷	
Feb. 10.0	21.714 ¹⁶⁹	52.01 ⁷¹		32.016 ¹⁸³	42.50 ⁵⁰		48.920 ¹⁷²	51.74 ³	
19.9	21.883 ¹⁹⁶	52.72 ⁵⁰		32.199 ²¹¹	42.00 ⁶⁰		49.092 ²⁰⁰	51.77 ¹³	
29.9	22.079 ²¹⁹	53.22 ²⁴		32.410 ²³⁶	41.40 ⁷¹		49.292 ²²³	51.64 ³⁰	
Mar. 10.9	22.298 ²⁴⁰	53.46 ⁴		32.646 ²⁵⁹	40.69 ⁸²		49.515 ²⁴⁶	51.34 ⁴⁹	
20.8	22.538 ²⁵⁹	53.42 ³²		32.905 ²⁷⁹	39.87 ⁹²		49.761 ²⁶⁵	50.85 ⁶⁷	
30.8	22.797 ²⁷⁴	53.10 ⁶¹		33.184 ²⁹⁶	38.95 ¹⁰¹		50.026 ²⁸⁰	50.18 ⁸⁴	
Apr. 9.8	23.071 ²⁸⁵	52.49 ⁸⁸		33.480 ³⁰⁸	37.94 ¹⁰⁷		50.306 ²⁹⁴	49.34 ¹⁰⁰	
19.8	23.356 ²⁹¹	51.61 ¹¹²		33.788 ³¹⁶	36.87 ¹⁰⁹		50.600 ³⁰¹	48.34 ¹¹³	
29.7	23.647 ²⁹²	50.49 ¹³²		34.104 ³¹⁹	35.78 ¹⁰⁹		50.901 ³⁰³	47.21 ¹²¹	
May 9.7	23.939 ²⁸⁷	49.17 ¹⁴⁸		34.423 ³¹⁵	34.69 ¹⁰⁴		51.204 ²⁹⁹	46.00 ¹²⁶	
19.7	24.226 ²⁷⁶	47.69 ¹⁵⁸		34.738 ³⁰⁴	33.65 ⁹⁷		51.503 ²⁹⁰	44.74 ¹²⁶	
29.7	24.502 ²⁵⁷	46.11 ¹⁶³		35.042 ²⁸⁸	32.68 ⁸⁵		51.793 ²⁷²	43.48 ¹²¹	
June 8.6	24.759 ²³³	44.48 ¹⁶⁴		35.330 ²⁶²	31.83 ⁷²		52.065 ²⁴⁸	42.27 ¹¹⁵	
18.6	24.992 ²⁰²	42.84 ¹⁵⁹		35.592 ²³⁰	31.11 ⁵⁵		52.313 ²¹⁸	41.12 ¹⁰³	
28.6	25.194 ¹⁶⁶	41.25 ¹⁵⁰		35.822 ¹⁹³	30.56 ³⁷		52.531 ¹⁸²	40.09 ⁸⁹	
July 8.5	25.360 ¹²⁷	39.75 ¹³⁸		36.015 ¹⁵⁰	30.19 ¹⁹		52.713 ¹⁴¹	39.20 ⁷³	
18.5	25.487 ⁸³	38.37 ¹²²		36.165 ¹⁰⁵	30.00 ²		52.854 ⁹⁸	38.47 ⁵⁷	
28.5	25.570 ³⁸	37.15 ¹⁰⁵		36.270 ⁵⁵	29.98 ¹⁶		52.952 ⁵¹	37.90 ³⁹	
Aug. 7.5	25.608 ⁶	36.10 ⁸⁷		36.325 ⁸	30.14 ³⁰		53.003 ⁶	37.51 ²³	
17.4	25.602 ⁴⁷	35.23 ⁶⁸		36.333 ⁴⁰	30.44 ⁴³		53.009 ³⁹	37.28 ⁷	
27.4	25.555 ⁸⁶	34.55 ⁴⁸		36.293 ⁸²	30.87 ⁵¹		52.970 ⁷⁸	37.21 ⁷	
Sept. 6.4	25.469 ¹¹⁹	34.07 ³⁰		36.211 ¹¹⁹	31.38 ⁵⁷		52.892 ¹¹⁴	37.28 ¹⁹	
16.4	25.350 ¹⁴⁴	33.77 ¹¹		36.092 ¹⁴⁸	31.95 ⁵⁸		52.778 ¹⁴¹	37.47 ²⁸	
26.3	25.206 ¹⁶²	33.66 ⁶		35.944 ¹⁶⁸	32.53 ⁵⁸		52.637 ¹⁶⁰	37.75 ³⁵	
Oct. 6.3	25.044 ¹⁶⁹	33.72 ²¹		35.776 ¹⁷⁸	33.11 ⁵³		52.477 ¹⁶⁹	38.10 ⁴⁰	
16.3	24.875 ¹⁶⁸	33.93 ³⁷		35.598 ¹⁷⁹	33.64 ⁴⁷		52.308 ¹⁷⁰	38.50 ⁴⁴	
26.2	24.707 ¹⁵⁹	34.30 ⁵¹		35.419 ¹⁶⁹	34.11 ⁴⁰		52.138 ¹⁶⁰	38.94 ⁴⁶	
Nov. 5.2	24.548 ¹⁴⁰	34.81 ⁶⁶		35.250 ¹⁵⁰	34.51 ³¹		51.978 ¹⁴³	39.40 ⁴⁷	
15.2	24.408 ¹¹⁶	35.47 ⁷⁸		35.100 ¹²⁴	34.82 ²²		51.835 ¹¹⁷	39.87 ⁴⁸	
25.2	24.292 ⁸⁵	36.25 ⁸⁹		34.976 ⁹⁰	35.04 ¹⁴		51.718 ⁸⁷	40.35 ⁴⁸	
Dec. 5.1	24.207 ⁵²	37.14 ⁹⁹		34.886 ⁵⁴	35.18 ⁵		51.631 ⁵²	40.83 ⁴⁸	
15.1	24.155 ¹⁶	38.13 ¹⁰⁷		34.832 ¹⁵	35.23 ³		51.579 ¹⁶	41.31 ⁴⁶	
25.1	24.139 ²¹	39.20 ¹¹¹		34.817 ²⁵	35.20 ⁹		51.563 ²²	41.77 ⁴⁴	
35.1	24.160	40.31		34.842	35.11		51.585	42.21	
Mean Place	23.041	52.50		33.576	45.06		50.356	53.23	
Sec δ , Tan δ	1.000	-0.018		1.079	-0.405		1.025	-0.227	
L α , L δ	0.00	+0.2		+0.01	+0.2		+0.01	+0.2	
ω α , ω δ	0.00	-0.9		+0.01	-0.8		+0.01	-0.8	
AUTHORITY	A. E.						A. E.		

410 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	β Capricorni. Mag. 3.3				γ Cygni. Mag. 2.3				α Pavonis. Mag. 2.1			
	R. A.		Dec. S.		R. A.		Dec. N.		R. A.		Dec. S.	
	h	m	°	'	h	m	°	'	h	m	°	'
	20	16	15	1	20	19	40	0	20	19	56	58
Jan. 1.1	42.734	40	18.60	26	28.402	28	56.01	284	35.227	33	50.85	217
11.0	42.774	77	18.86	21	28.374	20	53.17	296	35.260	101	48.68	228
21.0	42.851	110	19.07	12	28.394	67	50.21	296	35.361	165	46.40	236
31.0	42.961	142	19.19	2	28.461	114	47.25	285	35.526	227	44.04	237
Feb. 10.0	43.103	171	19.21	10	28.575	158	44.40	263	35.753	282	41.67	233
19.9	43.274	199	19.11	26	28.733	199	41.77	231	36.035	332	39.34	224
29.9	43.473	223	18.85	41	28.932	238	39.46	188	36.367	378	37.10	210
Mar. 10.9	43.696	246	18.44	58	29.170	272	37.58	140	36.745	417	35.00	193
20.9	43.942	265	17.86	75	29.442	299	36.18	85	37.162	449	33.07	172
30.8	44.207	283	17.11	90	29.741	322	35.33	27	37.611	477	31.35	148
Apr. 9.8	44.490	295	16.21	103	30.063	337	35.06	30	38.088	495	29.87	120
19.8	44.785	303	15.18	113	30.400	343	35.36	86	38.583	507	28.67	90
29.7	45.088	306	14.05	120	30.743	342	36.22	139	39.090	509	27.77	57
May 9.7	45.394	304	12.85	122	31.085	333	37.61	186	39.599	501	27.20	22
19.7	45.698	293	11.63	121	31.418	314	39.47	227	40.100	483	26.98	13
29.7	45.991	277	10.42	114	31.732	288	41.74	261	40.583	453	27.11	48
June 8.6	46.268	253	9.28	106	32.020	254	44.35	287	41.036	412	27.59	82
18.6	46.521	223	8.22	93	32.274	213	47.22	305	41.448	363	28.41	116
28.6	46.744	187	7.29	77	32.487	167	50.27	313	41.811	302	29.57	144
July 8.6	46.931	146	6.52	61	32.654	116	53.40	316	42.113	234	31.01	170
18.5	47.077	102	5.91	44	32.770	63	56.56	309	42.347	159	32.71	189
28.5	47.179	55	5.47	27	32.833	8	59.65	297	42.506	81	34.60	203
Aug. 7.5	47.234	9	5.20	10	32.841	44	62.62	277	42.587	3	36.63	209
17.4	47.243	36	5.10	5	32.797	94	65.39	252	42.590	75	38.72	209
27.4	47.207	77	5.15	18	32.703	140	67.91	222	42.515	147	40.81	199
Sept. 6.4	47.130	112	5.33	29	32.563	180	70.13	187	42.368	211	42.80	181
16.4	47.018	140	5.62	36	32.383	212	72.00	148	42.157	263	44.61	159
26.3	46.878	161	5.98	41	32.171	235	73.48	106	41.894	301	46.20	126
Oct. 6.3	46.717	171	6.39	44	31.936	249	74.54	61	41.593	324	47.46	90
16.3	46.546	170	6.83	46	31.687	252	75.15	15	41.269	331	48.36	50
26.3	46.376	161	7.29	45	31.435	247	75.30	33	40.938	320	48.86	7
Nov. 5.2	46.215	145	7.74	44	31.188	232	74.97	80	40.618	294	48.93	36
15.2	46.070	119	8.18	42	30.956	208	74.17	128	40.324	255	48.57	78
25.2	45.951	89	8.60	40	30.748	178	72.89	172	40.069	202	47.79	117
Dec. 5.1	45.862	54	9.00	38	30.570	140	71.17	213	39.867	142	46.62	151
15.1	45.808	17	9.38	35	30.430	100	69.04	247	39.725	75	45.11	181
25.1	45.791	19	9.73	31	30.330	56	66.57	273	39.650	7	43.30	204
35.1	45.810		10.04		30.274		63.84		39.643		41.26	
Mean Place	44.567		20.85		30.017		45.64		38.665		48.35	
Sec δ , Tan δ	1.035		-0.268		1.306		+0.839		1.835		-1.539	
L α , L δ	+0.01		+0.2		-0.02		+0.2		+0.03		+0.2	
ω α , ω δ	+0.01		-0.8		-0.03		-0.8		+0.06		-0.8	
AUTHORITY	A. N.				A. E.				A. E.			

APPARENT PLACES OF STARS, 1924. 411

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	ρ Capricorni. Mag. 5.0			ϵ Delphini. Mag. 4.0			α Indi. Mag. 3.2		
	R. A.		Dec. S.	R. A.		Dec. N.	R. A.		Dec. S.
	h	m	$^{\circ}$	h	m	$^{\circ}$	h	m	$^{\circ}$
	20	24	18 3	20	29	11 2	20	32	47 33
Jan. 1.1	29.792	34	56.01 7	33.390	10	44.25 168	10.797	22	31.42 166
11.0	29.826	70	56.08 0	33.400	45	42.57 170	10.819	74	29.76 179
21.0	29.896	105	56.08 9	33.445	80	40.87 165	10.893	125	27.97 190
31.0	30.001	136	55.99 19	33.525	111	39.22 153	11.018	174	26.07 197
Feb. 10.0	30.137	167	55.80 31	33.636	143	37.69 134	11.192	218	24.10 197
19.9	30.304	195	55.49 45	33.779	173	36.35 108	11.410	259	22.13 196
29.9	30.499	221	55.04 58	33.952	200	35.27 77	11.669	296	20.17 191
Mar. 10.9	30.720	245	54.46 74	34.152	225	34.50 42	11.965	330	18.26 182
20.9	30.965	265	53.72 87	34.377	248	34.08 5	12.295	359	16.44 170
30.8	31.230	283	52.85 99	34.625	266	34.03 35	12.654	384	14.74 155
Apr. 9.8	31.513	298	51.86 109	34.891	281	34.38 72	13.038	404	13.19 136
19.8	31.811	308	50.77 117	35.172	291	35.10 108	13.442	416	11.83 114
29.7	32.119	312	49.60 122	35.463	295	36.18 139	13.858	423	10.69 89
May 9.7	32.431	309	48.38 120	35.758	291	37.57 167	14.281	420	9.80 62
19.7	32.740	301	47.18 116	36.049	283	39.24 188	14.701	408	9.18 31
29.7	33.041	286	46.02 107	36.332	266	41.12 203	15.109	388	8.87 1
June 8.6	33.327	263	44.95 95	36.598	243	43.15 213	15.497	358	8.86 30
18.6	33.590	232	44.00 81	36.841	214	45.28 216	15.855	319	9.16 60
28.6	33.822	198	43.19 65	37.055	178	47.44 213	16.174	271	9.76 90
July 8.6	34.020	156	42.54 46	37.233	139	49.57 205	16.445	217	10.66 116
18.5	34.176	111	42.08 27	37.372	95	51.62 193	16.662	156	11.82 137
28.5	34.287	65	41.81 10	37.467	51	53.55 176	16.818	92	13.19 156
Aug. 7.5	34.352	17	41.71 6	37.518	7	55.31 157	16.910	28	14.75 166
17.4	34.369	29	41.77 22	37.525	37	56.88 135	16.938	37	16.41 172
27.4	34.340	71	41.99 33	37.488	76	58.23 110	16.901	97	18.13 170
Sept. 6.4	34.269	108	42.32 42	37.412	111	59.33 86	16.804	150	19.83 161
16.4	34.161	138	42.74 49	37.301	139	60.19 59	16.654	195	21.44 147
26.3	34.023	159	43.23 51	37.162	159	60.78 34	16.459	227	22.91 124
Oct. 6.3	33.864	170	43.74 52	37.003	170	61.12 7	16.232	249	24.15 96
16.3	33.694	173	44.26 50	36.833	173	61.19 20	15.983	255	25.11 65
26.3	33.521	165	44.76 46	36.660	168	60.99 46	15.728	251	25.76 30
Nov. 5.2	33.356	148	45.22 41	36.492	154	60.53 70	15.477	230	26.06 4
15.2	33.208	125	45.63 36	36.338	133	59.83 95	15.247	200	26.02 40
25.2	33.083	94	45.99 31	36.205	107	58.88 117	15.047	160	25.62 73
Dec. 5.1	32.989	60	46.30 24	36.098	77	57.71 137	14.887	113	24.89 104
15.1	32.929	24	46.54 19	36.021	44	56.34 153	14.774	62	23.85 131
25.1	32.905	13	46.73 13	35.977	9	54.81 165	14.712	8	22.54 152
35.1	32.918		46.86 13	35.968		53.16	14.704		21.02
Mean Place	31.657		57.39	34.941		38.36	13.553		28.49
Sec δ , Tan δ	1.052		-0.326	1.019		+0.195	1.482		-1.094
L α , L δ	+0.01		+0.2	0.00		+0.2	+0.02		+0.2
ω α , ω δ	+0.01		-0.8	-0.01		-0.8	+0.04		-0.8
AUTHORITY	A. N.			A. E.			A. E.		

412 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	α Delphini. Mag. 3.9		β Pavonis. Mag. 3.6		α Cygni. Mag. 1.3	
	R. A.	Dec. N.	R. A.	Dec. S.	R. A.	Dec. N.
	^h 20 ^m 36	[°] 15 ['] 38	^h 20 ^m 38	[°] 66 ['] 28	^h 20 ^m 38	[°] 45 ['] 0
Jan. 1.1	4.985 ^s 0	42.59 ^s 186	3.17 ^s 3	45.69 ^s 257	48.870 ^s 64	40.42 ^s 284
11.1	4.985 35	40.73 ^s 191	3.14 6	43.12 ^s 276	48.806 15	37.58 ^s 301
21.0	5.020 69	38.82 ^s 188	3.20 15	40.36 ^s 284	48.791 36	34.57 ^s 307
31.0	5.089 103	36.94 ^s 176	3.35 24	37.52 ^s 288	48.827 86	31.50 ^s 300
Feb. 10.0	5.192 135	35.18 ^s 158	3.59 32	34.64 ^s 282	48.913 137	28.50 ^s 282
19.9	5.327 167	33.60 ^s 131	3.91 40	31.82 ^s 273	49.050 186	25.68 ^s 253
29.9	5.494 196	32.29 ^s 98	4.31 47	29.09 ^s 256	49.236 230	23.15 ^s 214
Mar. 10.9	5.690 222	31.31 ^s 61	4.78 52	26.53 ^s 234	49.466 270	21.01 ^s 166
20.9	5.912 247	30.70 ^s 21	5.30 57	24.19 ^s 208	49.736 305	19.35 ^s 113
30.8	6.159 266	30.49 ^s 21	5.87 61	22.11 ^s 178	50.041 333	18.22 ^s 55
Apr. 9.8	6.425 283	30.70 ^s 63	6.48 64	20.33 ^s 144	50.374 353	17.67 ^s 5
19.8	6.708 293	31.33 ^s 102	7.12 67	18.89 ^s 107	50.727 365	17.72 ^s 63
29.8	7.001 298	32.35 ^s 139	7.79 67	17.82 ^s 67	51.092 367	18.35 ^s 118
May 9.7	7.299 296	33.74 ^s 169	8.46 66	17.15 ^s 25	51.459 360	19.53 ^s 170
19.7	7.595 287	35.43 ^s 195	9.12 65	16.90 ^s 17	51.819 344	21.23 ^s 216
29.7	7.882 271	37.38 ^s 214	9.77 61	17.07 ^s 59	52.163 317	23.39 ^s 254
June 8.6	8.153 247	39.52 ^s 227	10.38 56	17.66 ^s 99	52.480 283	25.93 ^s 285
18.6	8.400 218	41.79 ^s 234	10.94 49	18.65 ^s 138	52.763 241	28.78 ^s 307
28.6	8.618 182	44.13 ^s 233	11.43 42	20.03 ^s 172	53.004 193	31.85 ^s 322
July 8.6	8.800 143	46.46 ^s 228	11.85 33	21.75 ^s 201	53.197 140	35.07 ^s 328
18.5	8.943 99	48.74 ^s 217	12.18 24	23.76 ^s 225	53.337 84	38.35 ^s 327
28.5	9.042 54	50.91 ^s 201	12.42 13	26.01 ^s 241	53.421 26	41.62 ^s 318
Aug. 7.5	9.096 9	52.92 ^s 182	12.55 2	28.42 ^s 249	53.447 31	44.80 ^s 301
17.5	9.105 35	54.74 ^s 161	12.57 8	30.91 ^s 248	53.416 85	47.81 ^s 279
27.4	9.070 75	56.35 ^s 135	12.49 18	33.39 ^s 238	53.331 136	50.60 ^s 251
Sept. 6.4	8.995 111	57.70 ^s 107	12.31 27	35.77 ^s 219	53.195 181	53.11 ^s 218
16.4	8.884 139	58.77 ^s 80	12.04 34	37.96 ^s 192	53.014 217	55.29 ^s 180
26.3	8.745 160	59.57 ^s 50	11.70 41	39.88 ^s 156	52.797 246	57.09 ^s 138
Oct. 6.3	8.585 174	60.07 ^s 21	11.29 44	41.44 ^s 114	52.551 264	58.47 ^s 92
16.3	8.411 177	60.28 ^s 10	10.85 47	42.58 ^s 68	52.287 274	59.39 ^s 45
26.3	8.234 173	60.18 ^s 39	10.38 46	43.26 ^s 17	52.013 272	59.84 ^s 5
Nov. 5.2	8.061 161	59.79 ^s 69	9.92 44	43.43 ^s 35	51.741 261	59.79 ^s 56
15.2	7.900 141	59.10 ^s 98	9.48 39	43.08 ^s 86	51.480 242	59.23 ^s 106
25.2	7.759 116	58.12 ^s 124	9.09 34	42.22 ^s 132	51.238 214	58.17 ^s 154
Dec. 5.2	7.643 87	56.88 ^s 147	8.75 26	40.90 ^s 175	51.024 179	56.63 ^s 199
15.1	7.556 55	55.41 ^s 167	8.49 17	39.15 ^s 212	50.845 139	54.64 ^s 238
25.1	7.501 20	53.74 ^s 182	8.32 8	37.03 ^s 242	50.706 94	52.26 ^s 270
35.1	7.481	51.92 ^s	8.24	34.61 ^s	50.612	49.56 ^s
Mean Place	6.495	36.01	7.74	40.76	50.433	28.97
Sec δ , Tan δ	1.038	+0.280	2.506	-2.297	1.414	+1.000
L α , L δ	-0.01	+0.2	+0.05	+0.3	-0.02	+0.3
ω α , ω δ	-0.01	-0.8	+0.10	-0.8	-0.04	-0.8
AUTHORITY	A. E.		A. E.		A. E.	

APPARENT PLACES OF STARS, 1924. 413

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	ε Cygni. Mag. 2·6		ε Aquarii. Mag. 3·8		μ Aquarii. Mag. 4·8	
	R. A.	Dec. N.	R. A.	Dec. S.	R. A.	Dec. S.
	^h 20 43	[°] 33 40	^h 20 43	[°] 9 46	^h 20 48	[°] 9 15
Jan. 1·1	6·693 ^s 36	75·08 ^s 252	32·100 ^s 12	27·89 53	31·695 ^s 8	68·81 55
11·1	6·657 5	72·56 264	32·112 47	28·42 47	31·703 41	69·36 50
21·0	6·662 46	69·92 266	32·159 79	28·89 38	31·744 74	69·86 40
31·0	6·708 88	67·26 260	32·238 110	29·27 27	31·818 105	70·26 29
Feb. 10·0	6·796 128	64·66 241	32·348 141	29·54 11	31·923 135	70·55 13
20·0	6·924 167	62·25 212	32·489 169	29·65 6	32·058 164	70·68 5
29·9	7·091 204	60·13 176	32·658 196	29·59 26	32·222 191	70·63 24
Mar. 10·9	7·295 238	58·37 131	32·854 222	29·33 47	32·413 217	70·39 46
20·9	7·533 267	57·06 82	33·076 245	28·86 68	32·630 241	69·93 69
30·8	7·800 293	56·24 30	33·321 265	28·18 89	32·871 263	69·24 89
Apr. 9·8	8·093 311	55·94 25	33·586 282	27·29 108	33·134 280	68·35 109
19·8	8·404 323	56·19 77	33·868 295	26·21 124	33·414 293	67·26 125
29·8	8·727 328	56·96 127	34·163 301	24·97 135	33·707 301	66·01 138
May 9·7	9·055 325	58·23 172	34·464 303	23·62 144	34·008 302	64·63 146
19·7	9·380 313	59·95 211	34·767 296	22·18 146	34·310 298	63·17 150
29·7	9·693 293	62·06 244	35·063 284	20·72 145	34·608 286	61·67 148
June 8·7	9·986 266	64·50 269	35·347 263	19·27 140	34·894 266	60·19 143
18·6	10·252 231	67·19 286	35·610 237	17·87 129	35·160 240	58·76 134
28·6	10·483 191	70·05 296	35·847 203	16·58 115	35·400 206	57·42 120
July 8·6	10·674 145	73·01 299	36·050 166	15·43 100	35·606 170	56·22 104
18·5	10·819 97	76·00 294	36·216 122	14·43 82	35·776 127	55·18 86
28·5	10·916 47	78·94 283	36·338 78	13·61 63	35·903 82	54·32 67
Aug. 7·5	10·963 4	81·77 266	36·416 32	12·98 44	35·985 36	53·65 47
17·5	10·959 52	84·43 244	36·448 12	12·54 26	36·021 8	53·18 29
27·4	10·907 97	86·87 216	36·436 54	12·28 8	36·013 50	52·89 11
Sept. 6·4	10·810 137	89·03 184	36·382 91	12·20 7	35·963 87	52·78 5
16·4	10·673 169	90·87 150	36·291 122	12·27 20	35·876 119	52·83 18
26·4	10·504 195	92·37 111	36·169 144	12·47 31	35·757 141	53·01 29
Oct. 6·3	10·309 210	93·48 71	36·025 158	12·78 39	35·616 155	53·30 39
16·3	10·099 217	94·19 29	35·867 163	13·17 47	35·461 161	53·69 46
26·3	9·882 216	94·48 15	35·704 158	13·64 51	35·300 159	54·15 52
Nov. 5·2	9·666 206	94·33 58	35·546 147	14·15 55	35·141 147	54·67 56
15·2	9·460 187	93·75 102	35·399 127	14·70 58	34·994 128	55·23 59
25·2	9·273 162	92·73 143	35·272 101	15·28 59	34·866 103	55·82 61
Dec. 5·2	9·111 133	91·30 181	35·171 72	15·87 60	34·763 75	56·43 62
15·1	8·978 98	89·49 214	35·099 40	16·47 59	34·688 43	57·05 61
25·1	8·880 60	87·35 240	35·059 6	17·06 57	34·645 10	57·66 59
35·1	8·820	84·95	35·053	17·63	34·635	58·25
Mean Place	8·162	65·36	33·795	29·61	33·367	70·39
Sec δ, Tan δ	1·202	+0·667	1·015	−0·172	1·013	−0·163
L α, L δ	−0·01	+0·3	0·00	+0·3	0·00	+0·3
ω α, ω δ	−0·03	−0·8	+0·01	−0·8	+0·01	−0·7
AUTHORITY	A. E.		A. E.			

414 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	32 Vulpeculæ. Mag. 5.2		γ Microscopii. Mag. 4.7		θ Capricorni. Mag. 4.2	
	R. A.	Dec. N.	R. A.	Dec. S.	R. A.	Dec. S.
	h m 20 51	° ' 27 45	h m 20 56	° ' 32 33	h m 21 I	° ' 17 31
Jan. 1.1	17.809 ^s	72.96 ^s	35.956 ^s	23.95 ^s	38.870 ^s	69.84 ^s
11.1	17.776 ³³	70.68 ²²⁸	35.956 ⁴¹	23.17 ⁹²	38.869 ³²	69.92 ³
21.1	17.781 ⁵	68.29 ²³⁹	35.997 ⁷⁸	22.25 ¹⁰⁷	38.901 ⁶⁴	69.89 ¹³
31.0	17.823 ⁴²	65.88 ²⁴¹	36.075 ¹¹⁶	21.18 ¹¹⁸	38.965 ⁹⁸	69.76 ²⁷
Feb. 10.0	17.904 ⁸¹	63.54 ²³⁴	36.191 ¹⁵¹	20.00 ¹²⁹	39.063 ¹²⁸	69.49 ⁴⁰
20.0	18.022 ¹¹⁸	61.38 ²¹⁶	36.342 ¹⁸⁵	18.71 ¹³⁸	39.191 ¹⁵⁹	69.09 ⁵⁷
29.9	18.176 ¹⁵⁴	59.48 ¹⁹⁰	36.527 ²¹⁷	17.33 ¹⁴⁴	39.350 ¹⁸⁷	68.52 ⁷¹
Mar. 10.9	18.365 ¹⁸⁹	57.93 ¹⁵⁵	36.744 ²⁴⁷	15.89 ¹⁵⁰	39.537 ²¹⁶	67.81 ⁸⁹
20.9	18.586 ²²¹	56.79 ¹¹⁴	36.991 ²⁷⁵	14.39 ¹⁵³	39.753 ²⁴¹	66.92 ¹⁰³
30.9	18.836 ²⁵⁰	56.12 ⁶⁷	37.266 ²⁹⁹	12.86 ¹⁵³	39.994 ²⁶⁵	65.89 ¹¹⁸
Apr. 9.8	19.111 ²⁷⁵	55.93 ¹⁹	37.565 ³²⁰	11.33 ¹⁴⁹	40.259 ²⁸⁴	64.71 ¹²⁹
19.8	19.406 ²⁹⁵	56.24 ⁸¹	37.885 ³³⁷	9.84 ¹⁴²	40.543 ³⁰⁰	63.42 ¹³⁷
29.8	19.714 ³⁰⁸	57.04 ¹²⁶	38.222 ³⁴⁶	8.42 ¹³²	40.843 ³¹¹	62.05 ¹⁴²
May 9.8	20.028 ³¹⁴	58.30 ¹⁶⁷	38.568 ³⁵⁰	7.10 ¹¹⁷	41.154 ³¹⁵	60.63 ¹⁴²
19.7	20.342 ³⁰⁵	59.97 ²⁰⁴	38.918 ³⁴⁷	5.93 ⁹⁹	41.469 ³¹²	59.21 ¹³⁸
29.7	20.647 ²⁸⁸	62.01 ²³²	39.265 ³³⁴	4.94 ⁷⁸	41.781 ³⁰²	57.83 ¹³⁰
June 8.7	20.935 ²⁶⁴	64.33 ²⁵⁴	39.599 ³¹⁴	4.16 ⁵⁴	42.083 ²⁸⁴	56.53 ¹¹⁷
18.6	21.199 ²³³	66.87 ²⁷⁰	39.913 ²⁸⁵	3.62 ³⁰	42.367 ²⁵⁹	55.36 ¹⁰²
28.6	21.432 ¹⁹⁶	69.57 ²⁷⁷	40.198 ²⁴⁹	3.32 ³	42.626 ²²⁶	54.34 ⁸²
July 8.6	21.628 ¹⁵⁴	72.34 ²⁷⁸	40.447 ²⁰⁷	3.29 ²³	42.852 ¹⁸⁹	53.52 ⁶⁴
18.6	21.782 ¹⁰⁸	75.12 ²⁷³	40.654 ¹⁵⁹	3.52 ⁴⁶	43.041 ¹⁴⁶	52.88 ⁴¹
28.5	21.890 ⁶⁰	77.85 ²⁶¹	40.813 ¹⁰⁷	3.98 ⁶⁹	43.187 ¹⁰⁰	52.47 ²¹
Aug. 7.5	21.950 ¹²	80.46 ²⁴⁴	40.920 ⁵⁴	4.67 ⁸⁶	43.287 ⁵³	52.26 ¹
17.5	21.962 ³⁴	82.90 ²²¹	40.974 ²	5.53 ¹⁰¹	43.340 ⁷	52.25 ¹⁷
27.4	21.928 ⁷⁸	85.11 ¹⁹⁶	40.976 ⁴⁹	6.54 ¹¹⁰	43.347 ³⁸	52.42 ³³
Sept. 6.4	21.850 ¹¹⁶	87.07 ¹⁶⁶	40.927 ⁹³	7.64 ¹¹⁵	43.309 ⁷⁸	52.75 ⁴⁵
16.4	21.734 ¹⁴⁹	88.73 ¹³³	40.834 ¹³²	8.79 ¹¹²	43.231 ¹¹¹	53.20 ⁵⁵
26.4	21.585 ¹⁷³	90.06 ⁹⁸	40.702 ¹⁶²	9.91 ¹⁰⁶	43.120 ¹³⁸	53.75 ⁶⁰
Oct. 6.3	21.412 ¹⁸⁹	91.04 ⁶²	40.540 ¹⁸¹	10.97 ⁹⁴	42.982 ¹⁵⁵	54.35 ⁶³
16.3	21.223 ¹⁹⁷	91.66 ²³	40.359 ¹⁹⁰	11.91 ⁷⁹	42.827 ¹⁶³	54.98 ⁶²
26.3	21.026 ¹⁹⁷	91.89 ¹⁷	40.169 ¹⁸⁹	12.70 ⁵⁹	42.664 ¹⁶²	55.60 ⁵⁹
Nov. 5.3	20.829 ¹⁸⁶	91.72 ⁵⁶	39.980 ¹⁷⁸	13.29 ³⁸	42.502 ¹⁵³	56.19 ⁵⁴
15.2	20.643 ¹⁷¹	91.16 ⁹⁵	39.802 ¹⁵⁸	13.67 ¹⁶	42.349 ¹³⁵	56.73 ⁴⁷
25.2	20.472 ¹⁴⁸	90.21 ¹³¹	39.644 ¹²⁹	13.83 ⁶	42.214 ¹¹²	57.20 ⁴⁰
Dec. 5.2	20.324 ¹²¹	88.90 ¹⁶⁵	39.515 ⁹⁷	13.77 ²⁷	42.102 ⁸⁴	57.60 ³³
15.1	20.203 ⁸⁸	87.25 ¹⁹⁵	39.418 ⁶⁰	13.50 ⁴⁸	42.018 ⁵³	57.93 ²³
25.1	20.115 ⁵⁴	85.30 ²¹⁸	39.358 ²⁰	13.02 ⁶⁶	41.965 ²⁰	58.16 ¹⁵
35.1	20.061	83.12	39.338	12.36	41.945	58.31
Mean Place	19.233	64.27	38.056	20.93	40.624	69.15
Sec δ, Tan δ	1.130	+0.527	1.186	-0.638	1.049	-0.316
L α, L δ	-0.01	+0.3	+0.01	+0.3	+0.01	+0.3
ω α, ω δ	-0.02	-0.7	+0.03	-0.7	+0.02	-0.7
AUTHORITY	A. E.					

APPARENT PLACES OF STARS, 1924. 415

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	61 Cygni (1st star). Mag. 5.6		ζ Cygni. Mag. 3.4		α Equulei. Mag. 4.1	
	R. A.	Dec. N.	R. A.	Dec. N.	R. A.	Dec. N.
	^h ^m 21 3	[°] ['] 38 22	^h ^m 21 9	[°] ['] 29 54	^h ^m 21 12	[°] ['] 4 55
Jan. 1.1	27.872 ^s 57	40.00 ^s 245	40.705 ^s 53	60.95 ^s 225	0.055 ^s 20	61.83 ^s 125
11.1	27.815 14	37.55 262	40.652 18	58.70 239	0.035 10	60.58 124
21.1	27.801 29	34.93 268	40.634 20	56.31 244	0.045 42	59.34 120
31.0	27.830 73	32.25 266	40.654 59	53.87 240	0.087 72	58.14 109
Feb. 10.0	27.903 117	29.59 250	40.713 97	51.47 225	0.159 104	57.05 93
20.0	28.020 160	27.09 224	40.810 136	49.22 201	0.263 134	56.12 72
29.9	28.180 202	24.85 190	40.946 172	47.21 169	0.397 164	55.40 46
Mar. 10.9	28.382 241	22.95 147	41.118 208	45.52 130	0.561 193	54.94 16
20.9	28.623 276	21.48 97	41.326 241	44.22 83	0.754 221	54.78 15
30.9	28.899 305	20.51 44	41.567 269	43.39 36	0.975 244	54.93 49
Apr. 9.8	29.204 328	20.07 11	41.836 292	43.03 16	1.219 266	55.42 80
19.8	29.532 345	20.18 66	42.128 309	43.19 65	1.485 283	56.22 111
29.8	29.877 352	20.84 119	42.437 319	43.84 112	1.768 293	57.33 138
May 9.8	30.229 351	22.03 168	42.756 321	44.96 157	2.061 299	58.71 160
19.7	30.580 342	23.71 211	43.077 316	46.53 194	2.360 296	60.31 178
29.7	30.922 322	25.82 247	43.393 301	48.47 227	2.656 286	62.09 190
June 8.7	31.244 296	28.29 278	43.694 280	50.74 252	2.942 269	63.99 196
18.6	31.540 262	31.07 300	43.974 250	53.26 270	3.211 246	65.95 197
28.6	31.802 221	34.07 314	44.224 214	55.96 282	3.457 215	67.92 193
July 8.6	32.023 174	37.21 320	44.438 172	58.78 285	3.672 179	69.85 183
18.6	32.197 122	40.41 319	44.610 127	61.63 282	3.851 139	71.68 170
28.5	32.319 72	43.60 312	44.737 80	64.45 273	3.990 95	73.38 154
Aug. 7.5	32.391 19	46.72 297	44.817 30	67.18 259	4.085 52	74.92 134
17.5	32.410 33	49.69 277	44.847 18	69.77 237	4.137 7	76.26 113
27.4	32.377 80	52.46 250	44.829 62	72.14 214	4.144 34	77.39 91
Sept. 6.4	32.297 123	54.96 220	44.767 103	74.28 185	4.110 72	78.30 68
16.4	32.174 159	57.16 186	44.664 137	76.13 153	4.038 103	78.98 46
26.4	32.015 188	59.02 147	44.527 164	77.66 117	3.935 129	79.44 23
Oct. 6.3	31.827 208	60.49 105	44.363 184	78.83 81	3.806 146	79.67 2
16.3	31.619 219	61.54 62	44.179 195	79.64 42	3.660 155	79.69 18
26.3	31.400 221	62.16 16	43.984 198	80.06 2	3.505 155	79.51 38
Nov. 5.3	31.179 214	62.32 31	43.786 192	80.08 38	3.349 150	79.13 57
15.2	30.965 200	62.01 76	43.594 179	79.70 80	3.199 136	78.56 73
25.2	30.765 178	61.25 121	43.415 161	78.90 118	3.063 117	77.83 90
Dec. 5.2	30.587 151	60.04 163	43.254 135	77.72 154	2.946 93	76.93 103
15.1	30.436 117	58.41 200	43.119 107	76.18 186	2.853 66	75.90 115
25.1	30.319 80	56.41 231	43.012 74	74.32 213	2.787 38	74.75 122
35.1	30.239	54.10	42.938	72.19	2.749	73.53
Mean Place	29.264	29.52	42.042	51.87	1.499	58.22
Sec δ, Tan δ	1.276	+0.792	1.154	+0.575	1.004	+0.086
L α, L δ	-0.01	+0.3	-0.01	+0.3	0.00	+0.3
ω α, ω δ	-0.04	-0.7	-0.03	-0.7	0.00	-0.7
AUTHORITY	A. E.		A. E.		A. E.	

416 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.		θ^1 Microscopii. Mag. 4.9		α Cephei. Mag. 2.6		ι Capricorni. Mag. 4.3	
		R. A.	Dec. S.	R. A.	Dec. N.	R. A.	Dec. S.
		^h 21 ^m 15	[°] 41 ['] 7	^h 21 ^m 16	[°] 62 ['] 15	^h 21 ^m 17	[°] 17 ['] 9
Jan.	1.1	52.063 ^s	29 59.48	44.48 ^s	62.15 ^s	59.365 ^s	17 34.23
	11.1	52.034 ^s	15 58.27 ^s	23 44.25 ^s	272 59.43 ^s	16 59.348 ^s	9 34.32
	21.1	52.049 ^s	58 56.86 ^s	15 44.10 ^s	304 56.39 ^s	48 59.364 ^s	14 34.31
	31.0	52.107 ^s	99 55.27 ^s	0 44.02 ^s	324 53.15 ^s	79 59.412 ^s	29 34.17
Feb.	10.0	52.206 ^s	141 53.54 ^s	8 44.02 ^s	326 49.84 ^s	111 59.491 ^s	43 33.88
	20.0	52.347 ^s	179 51.69 ^s	17 44.10 ^s	308 46.58 ^s	141 59.602 ^s	59 33.45
Mar.	1.0	52.526 ^s	216 49.77 ^s	25 44.27 ^s	277 43.50 ^s	172 59.743 ^s	76 32.86
	10.9	52.742 ^s	252 47.81 ^s	32 44.52 ^s	237 40.73 ^s	200 59.915 ^s	94 32.10
Apr.	20.9	52.994 ^s	286 45.84 ^s	38 44.84 ^s	187 38.36 ^s	229 60.115 ^s	109 31.16
	30.9	53.280 ^s	316 43.90 ^s	44 45.22 ^s	130 36.49 ^s	254 60.344 ^s	124 30.07
	9.8	53.596 ^s	341 42.02 ^s	48 45.66 ^s	70 35.19 ^s	277 60.598 ^s	137 28.83
	19.8	53.937 ^s	363 40.25 ^s	50 46.14 ^s	8 34.49 ^s	294 60.875 ^s	145 27.46
May	29.8	54.300 ^s	378 38.62 ^s	52 46.64 ^s	53 34.41 ^s	308 61.169 ^s	151 26.01
	9.8	54.678 ^s	385 37.17 ^s	52 47.16 ^s	114 34.94 ^s	314 61.477 ^s	151 24.50
	19.7	55.063 ^s	384 35.95 ^s	50 47.68 ^s	169 36.08 ^s	315 61.791 ^s	148 22.99
	29.7	55.447 ^s	374 34.98 ^s	46 48.18 ^s	218 37.77 ^s	307 62.106 ^s	139 21.51
June	8.7	55.821 ^s	356 34.31 ^s	42 48.64 ^s	262 39.95 ^s	291 62.413 ^s	128 20.12
	18.7	56.177 ^s	327 33.94 ^s	36 49.06 ^s	297 42.57 ^s	269 62.704 ^s	111 18.84
	28.6	56.504 ^s	290 33.88 ^s	30 49.42 ^s	325 45.54 ^s	238 62.973 ^s	93 17.73
July	8.6	56.794 ^s	247 34.15 ^s	23 49.72 ^s	343 48.79 ^s	202 63.211 ^s	72 16.80
	18.6	57.041 ^s	195 34.72 ^s	15 49.95 ^s	355 52.22 ^s	160 63.413 ^s	50 16.08
	28.5	57.236 ^s	139 35.57 ^s	6 50.10 ^s	358 55.77 ^s	116 63.573 ^s	27 15.58
Aug.	7.5	57.375 ^s	82 36.68 ^s	1 50.16 ^s	353 59.35 ^s	69 63.689 ^s	6 15.31
	17.5	57.457 ^s	22 38.00 ^s	10 50.15 ^s	340 62.88 ^s	22 63.758 ^s	13 15.25
	27.5	57.479 ^s	34 39.46 ^s	17 50.05 ^s	320 66.28 ^s	23 63.780 ^s	31 15.38
Sept.	6.4	57.445 ^s	87 41.02 ^s	24 49.88 ^s	293 69.48 ^s	63 63.757 ^s	45 15.69
	16.4	57.358 ^s	131 42.59 ^s	29 49.64 ^s	259 72.41 ^s	99 63.694 ^s	56 16.14
	26.4	57.227 ^s	169 44.13 ^s	36 49.35 ^s	221 75.00 ^s	127 63.595 ^s	63 16.70
Oct.	6.4	57.058 ^s	196 45.55 ^s	39 48.99 ^s	177 77.21 ^s	145 63.468 ^s	66 17.33
	16.3	56.862 ^s	210 46.79 ^s	42 48.60 ^s	127 78.98 ^s	158 63.323 ^s	67 17.99
	26.3	56.652 ^s	214 47.80 ^s	43 48.18 ^s	74 80.25 ^s	159 63.165 ^s	64 18.66
Nov.	5.3	56.438 ^s	208 48.55 ^s	44 47.75 ^s	18 80.99 ^s	152 63.006 ^s	59 19.30
	15.2	56.230 ^s	189 48.99 ^s	43 47.31 ^s	39 81.17 ^s	138 62.854 ^s	53 19.89
Dec.	25.2	56.041 ^s	163 49.12 ^s	40 46.88 ^s	97 80.78 ^s	118 62.716 ^s	45 20.42
	5.2	55.878 ^s	131 48.93 ^s	37 46.48 ^s	152 79.81 ^s	93 62.598 ^s	36 20.87
	15.2	55.747 ^s	92 48.43 ^s	32 46.11 ^s	204 78.29 ^s	65 62.505 ^s	27 21.23
	25.1	55.655 ^s	52 47.64 ^s	27 45.79 ^s	249 76.25 ^s	33 62.440 ^s	17 21.50
	35.1	55.603 ^s	106 46.58 ^s	45.52 ^s	73.76 ^s	33 62.407 ^s	17 21.67
Mean Place		54.374	53.61	46.06	47.45	61.055	32.67
Sec δ , Tan δ		1.328	-0.873	2.149	+1.902	1.047	-0.309
L α , L δ		+0.02	+0.3	-0.03	+0.3	+0.01	+0.3
ω α , ω δ		+0.04	-0.7	-0.10	-0.7	+0.02	-0.7
AUTHORITY		A. N.		A. E.			

APPARENT PLACES OF STARS, 1924. 417

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.		γ Pavonis. Mag. 4.3			ζ Capricorni. Mag. 3.9			β Aquarii. Mag. 3.1				
		R. A.		Dec. S.	R. A.		Dec. S.	R. A.		Dec. S.		
		^h 21	^m 20	[°] 65 ['] 42	^h 21	^m 22	[°] 22 ['] 44	^h 21	^m 27	[°] 5 ['] 54		
Jan.	1.1	6.62	12	50.51	18.121	21	31.94	20	32.064	26	22.36	67
	11.1	6.50	4	48.10	18.100	12	31.74	35	32.038	3	23.03	62
	21.1	6.46	5	45.43	18.112	45	31.39	49	32.041	33	23.65	53
	31.0	6.51	13	42.57	18.157	78	30.90	65	32.074	63	24.18	40
Feb.	10.0	6.64	20	39.58	18.235	110	30.25	79	32.137	93	24.58	24
	20.0	6.84	29	36.54	18.345	143	29.46	93	32.230	124	24.82	6
Mar.	1.0	7.13	36	33.52	18.488	174	28.53	108	32.354	154	24.88	14
	10.9	7.49	43	30.58	18.662	204	27.45	122	32.508	184	24.74	43
	20.9	7.92	48	27.79	18.866	233	26.23	134	32.692	212	24.31	65
	30.9	8.40	53	25.20	19.099	260	24.89	144	32.904	238	23.66	88
	9.9	8.93	58	22.87	19.359	283	23.45	151	33.142	261	22.78	112
	19.8	9.51	62	20.84	19.642	303	21.94	154	33.403	281	21.66	131
May	29.8	10.13	64	19.16	19.945	317	20.40	154	33.684	294	20.35	148
	9.8	10.77	64	17.86	20.262	324	18.86	149	33.978	302	18.87	161
	19.7	11.41	64	16.98	20.586	325	17.37	141	34.280	303	17.26	167
	29.7	12.05	62	16.53	20.911	318	15.96	127	34.583	296	15.59	171
June	8.7	12.67	60	16.53	21.229	302	14.69	110	34.879	283	13.88	167
	18.7	13.27	54	16.98	21.531	280	13.59	90	35.162	261	12.21	161
	28.6	13.81	48	17.86	21.811	250	12.69	68	35.423	233	10.60	149
July	8.6	14.29	40	19.15	22.061	213	12.01	44	35.656	198	9.11	134
	18.6	14.69	32	20.82	22.274	171	11.57	20	35.854	160	7.77	116
Aug.	28.6	15.01	22	22.81	22.445	124	11.37	4	36.014	116	6.61	96
	7.5	15.23	12	25.05	22.569	77	11.41	26	36.130	72	5.65	75
	17.5	15.35	1	27.47	22.646	28	11.67	45	36.202	27	4.90	54
Sept.	27.5	15.36	9	29.99	22.674	19	12.12	62	36.229	15	4.36	33
	6.4	15.27	18	32.51	22.655	61	12.74	74	36.214	54	4.03	14
	16.4	15.09	26	34.93	22.594	99	13.48	82	36.160	88	3.89	4
	26.4	14.83	33	37.17	22.495	128	14.30	85	36.072	116	3.93	19
Oct.	6.4	14.50	40	39.12	22.367	150	15.15	84	35.956	136	4.12	33
	16.3	14.10	42	40.71	22.217	162	15.99	79	35.820	146	4.45	44
	26.3	13.68	44	41.87	22.055	165	16.78	71	35.674	151	4.89	53
Nov.	5.3	13.24	44	42.55	21.890	160	17.49	60	35.523	145	5.42	59
	15.3	12.80	41	42.72	21.730	145	18.09	47	35.378	135	6.01	66
Dec.	25.2	12.39	37	42.36	21.585	126	18.56	33	35.243	117	6.67	69
	5.2	12.02	32	41.48	21.459	100	18.89	19	35.126	95	7.36	71
	15.2	11.70	24	40.12	21.359	70	19.08	4	35.031	70	8.07	72
	25.1	11.46		38.31	21.289		19.12		34.961		8.79	
	35.1	11.29	17	36.12	21.251	38	19.01	11	34.919	42	9.49	70
Mean Place		10.83		41.33	19.899		28.94	33.559		22.85		
Sec δ, Tan δ		2.431		-2.216	1.084		-0.419	1.005		-0.103		
L α, L δ		+0.04		+0.3	+0.01		+0.3	0.00		+0.3		
ω α, ω δ		+0.11		-0.6	+0.02		-0.6	+0.01		-0.6		
AUTHORITY		A. E.				A. E.		A. E.				

418 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	β Cephei. Mag. 3.3			ξ Aquarii. Mag. 4.8			ϵ Pegasi. Mag. 2.5		
	R. A.		Dec. N.	R. A.		Dec. S.	R. A.		Dec. N.
	h	m		h	m		h	m	
	21	27	70	21	33	8	21	40	9
	s		'	s		'	s		'
Jan. 1.1	39.46	37	52.58	40.959	31	45.16	25.887	47	36.88
11.1	39.09	29	49.98	40.928	1	45.72	25.840	19	35.53
21.1	38.80	17	47.01	40.927	28	46.20	25.821	11	34.15
31.1	38.63	7	43.80	40.955	58	46.58	25.832	41	32.78
Feb. 10.0	38.56	6	40.45	41.013	88	46.83	25.873	73	31.49
20.0	38.62	17	37.10	41.101	120	46.92	25.946	105	30.34
Mar. 1.0	38.79	29	33.88	41.221	148	46.83	26.051	137	29.39
10.9	39.08	39	30.92	41.369	180	46.52	26.188	169	28.70
20.9	39.47	48	28.33	41.549	209	45.99	26.357	199	28.31
30.9	39.95	57	26.21	41.758	235	45.23	26.556	229	28.25
Apr. 9.9	40.52	62	24.62	41.993	260	44.25	26.785	254	28.55
19.8	41.14	66	23.63	42.253	280	43.06	27.039	275	29.19
29.8	41.80	68	23.26	42.533	294	41.68	27.314	290	30.18
May 9.8	42.48	68	23.52	42.827	304	40.16	27.604	300	31.49
19.8	43.16	66	24.38	43.131	306	38.54	27.904	302	33.06
29.7	43.82	62	25.83	43.437	301	36.87	28.206	296	34.86
June 8.7	44.44	55	27.80	43.738	287	35.20	28.502	282	36.83
18.7	44.99	48	30.24	44.025	268	33.57	28.784	263	38.92
28.6	45.47	40	33.08	44.293	239	32.03	29.047	234	41.06
July 8.6	45.87	30	36.24	44.532	205	30.62	29.281	201	43.20
18.6	46.17	19	39.63	44.737	167	29.38	29.482	162	45.28
28.6	46.36	9	43.19	44.904	124	28.33	29.644	120	47.26
Aug. 7.5	46.45	2	46.82	45.028	79	27.49	29.764	76	49.10
17.5	46.43	13	50.44	45.107	34	26.86	29.840	33	50.75
27.5	46.30	23	53.99	45.141	9	26.45	29.873	10	52.20
Sept. 6.5	46.07	32	57.37	45.132	48	26.25	29.863	49	53.42
16.4	45.75	41	60.52	45.084	84	26.23	29.814	84	54.41
26.4	45.34	48	63.37	45.000	112	26.38	29.730	111	55.15
Oct. 6.4	44.86	54	65.86	44.888	131	26.67	29.619	132	55.65
16.3	44.32	58	67.92	44.757	145	27.08	29.487	145	55.90
26.3	43.74	62	69.50	44.612	149	27.58	29.342	151	55.91
Nov. 5.3	43.12	63	70.56	44.463	145	28.15	29.191	150	55.69
15.3	42.49	63	71.05	44.318	135	28.76	29.041	141	55.25
25.2	41.86	60	70.95	44.183	118	29.40	28.900	128	54.59
Dec. 5.2	41.26	56	70.26	44.065	98	30.05	28.772	109	53.74
15.2	40.70	51	68.98	43.967	73	30.70	28.663	87	52.70
25.2	40.19	44	67.14	43.894	46	31.33	28.576	61	51.51
35.1	39.75		64.81	43.848		31.93	28.515		50.21
Mean Place	41.22		36.69	42.456		44.83	27.176		33.02
Sec δ , Tan δ	2.956		+2.782	1.010		-0.144	1.014		+0.168
L α , L δ	-0.05		+0.3	0.00		+0.3	0.00		+0.3
ω α , ω δ	-0.15		-0.6	+0.01		-0.6	-0.01		-0.6
AUTHORITY	A. E.						A. E.		

APPARENT PLACES OF STARS, 1924. 419

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	δ Capricorni. Mag. 3.0		γ Gruis. Mag. 3.2		16 Pegasi. Mag. 5.1	
	R. A.	Dec. S.	R. A.	Dec. S.	R. A.	Dec. N.
	^h 21 ^m 42	[°] 16 ['] 28	^h 21 ^m 49	[°] 37 ['] 43	^h 21 ^m 49	[°] 25 ['] 33
Jan. 1.1	49.310 ³⁷	25.30 ¹⁵	17.849 ⁶⁰	31.24 ⁹³	35.038 ⁷⁷	69.17 ¹⁸⁶
11.1	49.273 ⁸	25.45 ²	17.789 ²⁴	30.31 ¹¹⁶	34.961 ⁴⁸	67.31 ²⁰³
21.1	49.265 ²²	25.47 ¹²	17.765 ¹⁵	29.15 ¹³⁹	34.913 ¹⁵	65.28 ²¹⁰
31.1	49.287 ⁵³	25.35 ²⁸	17.780 ⁵²	27.76 ¹⁵⁹	34.898 ¹⁸	63.18 ²⁰⁹
Feb. 10.0	49.340 ⁸⁵	25.07 ⁴⁴	17.832 ⁹¹	26.17 ¹⁷⁵	34.916 ⁵⁵	61.09 ¹⁹⁹
20.0	49.425 ¹¹⁵	24.63 ⁶¹	17.923 ¹²⁹	24.42 ¹⁸⁷	34.971 ⁹²	59.10 ¹⁸²
Mar. 1.0	49.540 ¹⁴⁷	24.02 ⁸⁰	18.052 ¹⁶⁷	22.55 ¹⁹⁸	35.063 ¹²⁹	57.28 ¹⁵⁴
10.9	49.687 ¹⁷⁸	23.22 ⁹⁸	18.219 ²⁰⁴	20.57 ²⁰⁵	35.192 ¹⁶⁷	55.74 ¹²²
20.9	49.865 ²⁰⁸	22.24 ¹¹⁶	18.423 ²⁴⁰	18.52 ²⁰⁷	35.359 ²⁰²	54.52 ⁸¹
30.9	50.073 ²³⁷	21.08 ¹³¹	18.663 ²⁷³	16.45 ²⁰⁷	35.561 ²³⁵	53.71 ³⁸
Apr. 9.9	50.310 ²⁶³	19.77 ¹⁴⁵	18.936 ³⁰⁵	14.38 ²⁰¹	35.796 ²⁶⁵	53.33 ⁷
19.8	50.573 ²⁸⁵	18.32 ¹⁵⁵	19.241 ³³⁰	12.37 ¹⁹²	36.061 ²⁸⁸	53.40 ⁵³
29.8	50.858 ³⁰¹	16.77 ¹⁶¹	19.571 ³⁵²	10.45 ¹⁷⁸	36.349 ³⁰⁶	53.93 ⁹⁷
May 9.8	51.159 ³¹³	15.16 ¹⁶³	19.923 ³⁶⁴	8.67 ¹⁵⁹	36.655 ³¹⁵	54.90 ¹³⁸
19.8	51.472 ³¹⁶	13.53 ¹⁶¹	20.287 ³⁷¹	7.08 ¹³⁶	36.970 ³¹⁸	56.28 ¹⁷⁶
29.7	51.788 ³¹³	11.92 ¹⁵⁴	20.658 ³⁶⁸	5.72 ¹¹⁰	37.288 ³¹²	58.04 ²⁰⁶
June 8.7	52.101 ³⁰¹	10.38 ¹⁴¹	21.026 ³⁵⁷	4.62 ⁸⁰	37.600 ²⁹⁷	60.10 ²³²
18.7	52.402 ²⁸¹	8.97 ¹²⁶	21.383 ³³⁵	3.82 ⁴⁸	37.897 ²⁷⁵	62.42 ²⁵⁰
28.6	52.683 ²⁵⁵	7.71 ¹⁰⁶	21.718 ³⁰⁵	3.34 ¹⁵	38.172 ²⁴⁵	64.92 ²⁶³
July 8.6	52.938 ²²¹	6.65 ⁸⁶	22.023 ²⁶⁷	3.19 ¹⁸	38.417 ²¹⁰	67.55 ²⁶⁷
18.6	53.159 ¹⁸³	5.79 ⁶²	22.290 ²²³	3.37 ⁵⁰	38.627 ¹⁶⁸	70.22 ²⁶⁷
28.6	53.342 ¹³⁹	5.17 ³⁸	22.513 ¹⁷¹	3.87 ⁸⁰	38.795 ¹²⁵	72.89 ²⁶⁰
Aug. 7.5	53.481 ⁹³	4.79 ¹⁴	22.684 ¹¹⁸	4.67 ¹⁰⁶	38.920 ⁷⁸	75.49 ²⁴⁷
17.5	53.574 ⁴⁷	4.65 ⁷	22.802 ⁶²	5.73 ¹²⁸	38.998 ³¹	77.96 ²³¹
27.5	53.621 ²	4.72 ²⁷	22.864 ⁷	7.01 ¹⁴³	39.029 ¹³	80.27 ²⁰⁸
Sept. 6.5	53.623 ⁴⁰	4.99 ⁴⁴	22.871 ⁴⁴	8.44 ¹⁵³	39.016 ⁵⁵	82.35 ¹⁸³
16.4	53.583 ⁷⁷	5.43 ⁵⁷	22.827 ⁹¹	9.97 ¹⁵⁵	38.961 ⁹¹	84.18 ¹⁵⁶
26.4	53.506 ¹⁰⁸	6.00 ⁶⁷	22.736 ¹³¹	11.52 ¹⁵¹	38.870 ¹²³	85.74 ¹²⁴
Oct. 6.4	53.398 ¹³⁰	6.67 ⁷²	22.605 ¹⁶¹	13.03 ¹⁴⁰	38.747 ¹⁴⁵	86.98 ⁹²
16.3	53.268 ¹⁴⁵	7.39 ⁷⁴	22.444 ¹⁸²	14.43 ¹²⁴	38.602 ¹⁶²	87.90 ⁵⁸
26.3	53.123 ¹⁵¹	8.13 ⁷³	22.262 ¹⁹²	15.67 ¹⁰¹	38.440 ¹⁷¹	88.48 ²²
Nov. 5.3	52.972 ¹⁵⁰	8.86 ⁶⁹	22.070 ¹⁹³	16.68 ⁷⁵	38.269 ¹⁷²	88.70 ¹⁵
15.3	52.822 ¹⁴⁰	9.55 ⁶²	21.877 ¹⁸³	17.43 ⁴⁵	38.097 ¹⁶⁷	88.55 ⁵⁰
25.2	52.682 ¹²⁴	10.17 ⁵³	21.694 ¹⁶⁷	17.88 ¹⁵	37.930 ¹⁵⁵	88.05 ⁸⁵
Dec. 5.2	52.558 ¹⁰⁴	10.70 ⁴⁵	21.527 ¹⁴²	18.03 ¹⁶	37.775 ¹⁴⁰	87.20 ¹¹⁸
15.2	52.454 ⁸⁰	11.15 ³⁴	21.385 ¹¹²	17.87 ⁴⁶	37.635 ¹¹⁷	86.02 ¹⁴⁹
25.2	52.374 ⁵³	11.49 ²²	21.273 ⁷⁹	17.41 ⁷⁵	37.518 ⁹⁴	84.53 ¹⁷⁴
35.1	52.321	11.71	21.194	16.66	37.424	82.79
Mean Place	50.892	22.48	19.891	23.28	36.183	61.41
Sec δ, Tan δ	1.043	-0.296	1.264	-0.774	1.109	+0.478
L α, L δ	0.00	+0.3	+0.01	+0.3	-0.01	+0.3
ω α, ω δ	+0.02	-0.6	+0.04	-0.5	-0.03	-0.5
AUTHORITY	A. E.		A. E.		A. E.	

420 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	α Aquarii. Mag. 3.2		α Gruis. Mag. 2.2		ϵ Pegasi. Mag. 4.0	
	R. A.	Dec. S.	R. A.	Dec. S.	R. A.	Dec. N.
	^h ^m 22 I	[°] ['] 0 41	^h ^m 22 3	[°] ['] 47 19	^h ^m 22 3	[°] ['] 24 58
Jan. 1.1	51.580 ^s	22.22 ^s 87	24.678 ^s 98	58.99 ^s 131	27.220 ^s 87	31.21 ^s 176
11.1	51.526 ^s 54	23.09 ^s 83	24.580 ^s 57	57.68 ^s 162	27.133 ^s 57	29.45 ^s 192
21.1	51.496 ^s 30	23.92 ^s 76	24.523 ^s 13	56.06 ^s 189	27.076 ^s 28	27.53 ^s 201
31.1	51.494 ^s 26	24.68 ^s 65	24.510 ^s 33	54.17 ^s 212	27.048 ^s 5	25.52 ^s 202
Feb. 10.0	51.520 ^s 56	25.33 ^s 50	24.543 ^s 78	52.05 ^s 229	27.053 ^s 41	23.50 ^s 194
20.0	51.576 ^s 87	25.83 ^s 31	24.621 ^s 123	49.76 ^s 241	27.094 ^s 77	21.56 ^s 177
Mar. 1.0	51.663 ^s 118	26.14 ^s 8	24.744 ^s 168	47.35 ^s 249	27.171 ^s 115	19.79 ^s 152
11.0	51.781 ^s 151	26.22 ^s 17	24.912 ^s 213	44.86 ^s 253	27.286 ^s 154	18.27 ^s 121
20.9	51.932 ^s 183	26.05 ^s 45	25.125 ^s 255	42.33 ^s 250	27.440 ^s 188	17.06 ^s 83
30.9	52.115 ^s 212	25.60 ^s 72	25.380 ^s 296	39.83 ^s 244	27.628 ^s 225	16.23 ^s 41
Apr. 9.9	52.327 ^s 241	24.88 ^s 99	25.676 ^s 334	37.39 ^s 231	27.853 ^s 255	15.82 ^s 3
19.8	52.568 ^s 265	23.89 ^s 124	26.010 ^s 365	35.08 ^s 214	28.108 ^s 282	15.85 ^s 48
29.8	52.833 ^s 284	22.65 ^s 147	26.375 ^s 391	32.94 ^s 193	28.390 ^s 301	16.33 ^s 91
May 9.8	53.117 ^s 297	21.18 ^s 164	26.766 ^s 410	31.01 ^s 165	28.691 ^s 315	17.24 ^s 132
19.8	53.414 ^s 303	19.54 ^s 178	27.176 ^s 419	29.36 ^s 135	29.006 ^s 318	18.56 ^s 168
29.7	53.717 ^s 301	17.76 ^s 186	27.595 ^s 419	28.01 ^s 100	29.324 ^s 316	20.24 ^s 200
June 8.7	54.018 ^s 293	15.90 ^s 189	28.014 ^s 408	27.01 ^s 64	29.640 ^s 304	22.24 ^s 226
18.7	54.311 ^s 276	14.01 ^s 186	28.422 ^s 388	26.37 ^s 24	29.944 ^s 283	24.50 ^s 244
28.7	54.587 ^s 252	12.15 ^s 179	28.810 ^s 356	26.13 ^s 15	30.227 ^s 256	26.94 ^s 258
July 8.6	54.839 ^s 221	10.36 ^s 167	29.166 ^s 316	26.28 ^s 54	30.483 ^s 222	29.52 ^s 264
18.6	55.060 ^s 185	8.69 ^s 152	29.482 ^s 265	26.82 ^s 91	30.705 ^s 182	32.16 ^s 263
28.6	55.245 ^s 145	7.17 ^s 133	29.747 ^s 211	27.73 ^s 124	30.887 ^s 139	34.79 ^s 258
Aug. 7.5	55.390 ^s 102	5.84 ^s 112	29.958 ^s 149	28.97 ^s 152	31.026 ^s 94	37.37 ^s 246
17.5	55.492 ^s 58	4.72 ^s 90	30.107 ^s 86	30.49 ^s 175	31.120 ^s 98	39.83 ^s 230
27.5	55.550 ^s 16	3.82 ^s 68	30.193 ^s 23	32.24 ^s 191	31.168 ^s 3	42.13 ^s 209
Sept. 6.5	55.566 ^s 25	3.14 ^s 46	30.216 ^s 39	34.15 ^s 199	31.171 ^s 39	44.22 ^s 185
16.4	55.541 ^s 60	2.68 ^s 24	30.177 ^s 94	36.14 ^s 200	31.132 ^s 76	46.07 ^s 158
26.4	55.481 ^s 90	2.44 ^s 5	30.083 ^s 143	38.14 ^s 191	31.056 ^s 108	47.65 ^s 129
Oct. 6.4	55.391 ^s 113	2.39 ^s 12	29.940 ^s 183	40.05 ^s 174	30.948 ^s 133	48.94 ^s 97
16.4	55.278 ^s 130	2.51 ^s 29	29.757 ^s 211	41.79 ^s 151	30.815 ^s 150	49.91 ^s 64
26.3	55.148 ^s 138	2.80 ^s 43	29.546 ^s 228	43.30 ^s 121	30.665 ^s 162	50.55 ^s 29
Nov. 5.3	55.010 ^s 139	3.23 ^s 55	29.318 ^s 234	44.51 ^s 86	30.503 ^s 166	50.84 ^s 5
15.3	54.871 ^s 135	3.78 ^s 65	29.084 ^s 228	45.37 ^s 47	30.337 ^s 163	50.79 ^s 41
25.2	54.736 ^s 124	4.43 ^s 73	28.856 ^s 212	45.84 ^s 7	30.174 ^s 154	50.38 ^s 75
Dec. 5.2	54.612 ^s 109	5.16 ^s 81	28.644 ^s 188	45.91 ^s 33	30.020 ^s 140	49.63 ^s 108
15.2	54.503 ^s 90	5.97 ^s 84	28.456 ^s 156	45.58 ^s 73	29.880 ^s 122	48.55 ^s 137
25.2	54.413 ^s 67	6.81 ^s 86	28.300 ^s 120	44.85 ^s 109	29.758 ^s 100	47.18 ^s 164
35.1	54.346 ^s	7.67 ^s	28.180 ^s	43.76 ^s	29.658 ^s	45.54 ^s
Mean Place	52.868	22.60	27.014	48.16	28.289	23.80
Sec δ , Tan δ	1.000	-0.012	1.475	-1.085	1.103	+0.466
L α , L δ	0.00	+0.3	+0.01	+0.3	-0.01	+0.3
ω α , ω δ	0.00	-0.5	+0.06	-0.5	-0.03	-0.5
AUTHORITY	A. E.		A. E.		A. N.	

APPARENT PLACES OF STARS, 1924. 421

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	ζ Cephei. Mag. 3.6		θ Aquarii. Mag. 4.3		α Tucanæ. Mag. 2.9	
	R. A.	Dec. N.	R. A.	Dec. S.	R. A.	Dec. S.
	^h 22 ^m 8	[°] 57 ['] 49	^h 22 ^m 12	[°] 8 ['] 9	^h 22 ^m 13	[°] 60 ['] 37
Jan. 1.1	11.920 ²⁴⁵	49.40 ²²¹	48.138 ⁶⁰	46.27 ⁵³	15.26 ¹⁹	93.57 ¹⁸³
11.1	11.675 ¹⁹⁶	47.19 ²⁵⁹	48.078 ³⁵	46.80 ⁴⁴	15.07 ¹²	91.74 ²²⁰
21.1	11.479 ¹⁴⁰	44.60 ²⁸⁸	48.043 ¹⁰	47.24 ³³	14.95 ⁶	89.54 ²⁵¹
31.1	11.339 ⁷⁷	41.72 ³⁰⁵	48.033 ¹⁹	47.57 ¹⁹	14.89 ⁰	87.03 ²⁷⁵
Feb. 10.0	11.262 ⁸	38.67 ³¹¹	48.052 ⁴⁸	47.76 ²	14.89 ⁷	84.28 ²⁹³
20.0	11.254 ⁶³	35.56 ³⁰⁴	48.100 ⁷⁹	47.78 ¹⁷	14.96 ¹³	81.35 ³⁰³
Mar. 1.0	11.317 ¹³⁵	32.52 ²⁸⁵	48.179 ¹¹¹	47.61 ³⁹	15.09 ¹⁹	78.32 ³⁰⁷
11.0	11.452 ²⁰⁶	29.67 ²⁵⁵	48.290 ¹⁴⁴	47.22 ⁶¹	15.28 ²⁶	75.25 ³⁰⁵
20.9	11.658 ²⁷³	27.12 ²¹⁴	48.434 ¹⁷⁶	46.61 ⁸⁴	15.54 ³²	72.20 ²⁹⁶
30.9	11.931 ³³²	24.98 ¹⁶⁷	48.610 ²⁰⁷	45.77 ¹⁰⁶	15.86 ³⁷	69.24 ²⁸¹
Apr. 9.9	12.263 ³⁸⁴	23.31 ¹¹²	48.817 ²³⁶	44.71 ¹²⁸	16.23 ⁴³	66.43 ²⁵⁹
19.8	12.647 ⁴²⁴	22.19 ⁵⁵	49.053 ²⁶³	43.43 ¹⁴⁷	16.66 ⁴⁷	63.84 ²³³
29.8	13.071 ⁴⁵²	21.64 ⁵	49.316 ²⁸³	41.96 ¹⁶¹	17.13 ⁵⁰	61.51 ²⁰²
May 9.8	13.523 ⁴⁶⁸	21.69 ⁶³	49.599 ²⁹⁹	40.35 ¹⁷³	17.63 ⁵³	59.49 ¹⁶⁵
19.8	13.991 ⁴⁷⁰	22.32 ¹²⁰	49.898 ³⁰⁶	38.62 ¹⁷⁹	18.16 ⁵⁵	57.84 ¹²⁴
29.7	14.461 ⁴⁵⁸	23.52 ¹⁷³	50.204 ³⁰⁸	36.83 ¹⁷⁹	18.71 ⁵⁵	56.60 ⁸¹
June 8.7	14.919 ⁴³⁴	25.25 ²¹⁹	50.512 ³⁰¹	35.04 ¹⁷⁶	19.26 ⁵³	55.79 ³⁵
18.7	15.353 ³⁹⁷	27.44 ²⁶⁰	50.813 ²⁸⁶	33.28 ¹⁶⁷	19.79 ⁵¹	55.44 ¹¹
28.7	15.750 ³⁵⁰	30.04 ²⁹⁴	51.099 ²⁶⁴	31.61 ¹⁵⁴	20.30 ⁴⁷	55.55 ⁵⁸
July 8.6	16.100 ²⁹⁵	32.98 ³²⁰	51.363 ²³⁴	30.07 ¹³⁶	20.77 ⁴²	56.13 ¹⁰¹
18.6	16.395 ²³³	36.18 ³³⁸	51.597 ¹⁹⁹	28.71 ¹¹⁷	21.19 ³⁶	57.14 ¹⁴³
28.6	16.628 ¹⁶⁵	39.56 ³⁵⁰	51.796 ¹⁵⁹	27.54 ⁹⁵	21.55 ²⁸	58.57 ¹⁷⁹
Aug. 7.5	16.793 ⁹⁶	43.06 ³⁵²	51.955 ¹¹⁷	26.59 ⁷¹	21.83 ²¹	60.36 ²⁰⁹
17.5	16.889 ²⁵	46.58 ³⁴⁸	52.072 ⁷²	25.88 ⁴⁷	22.04 ¹²	62.45 ²³²
27.5	16.914 ⁴³	50.06 ³³⁵	52.144 ²⁹	25.41 ²⁵	22.16 ³	64.77 ²⁴⁶
Sept. 6.5	16.871 ¹⁰⁹	53.41 ³¹⁷	52.173 ¹²	25.16 ⁴	22.19 ⁵	67.23 ²⁵¹
16.4	16.762 ¹⁶⁸	56.58 ²⁹⁰	52.161 ⁴⁹	25.12 ¹⁵	22.14 ¹³	69.74 ²⁴⁷
26.4	16.594 ²²¹	59.48 ²⁵⁹	52.112 ⁸¹	25.27 ³²	22.01 ²⁰	72.21 ²³²
Oct. 6.4	16.373 ²⁶⁶	62.07 ²²¹	52.031 ¹⁰⁶	25.59 ⁴⁵	21.81 ²⁶	74.53 ²⁰⁸
16.4	16.107 ³⁰¹	64.28 ¹⁷⁸	51.925 ¹²⁴	26.04 ⁵⁵	21.55 ³⁰	76.61 ¹⁷⁵
26.3	15.806 ³²⁷	66.06 ¹³⁰	51.801 ¹³⁴	26.59 ⁶²	21.25 ³⁴	78.36 ¹³⁵
Nov. 5.3	15.479 ³⁴⁴	67.36 ⁷⁸	51.667 ¹³⁸	27.21 ⁶⁷	20.91 ³⁵	79.71 ⁸⁹
15.3	15.135 ³⁴⁹	68.14 ²³	51.529 ¹³⁴	27.88 ⁶⁸	20.56 ³⁴	80.60 ⁴⁰
25.2	14.786 ³⁴⁵	68.37 ³³	51.395 ¹²⁵	28.56 ⁶⁹	20.22 ³³	81.00 ¹¹
Dec. 5.2	14.441 ³³¹	68.04 ⁸⁹	51.270 ¹¹¹	29.25 ⁶⁷	19.89 ³¹	80.89 ⁶²
15.2	14.110 ³⁰⁶	67.15 ¹⁴⁴	51.159 ⁹⁴	29.92 ⁶³	19.58 ²⁶	80.27 ¹¹²
25.2	13.804 ²⁷²	65.71 ¹⁹²	51.065 ⁷²	30.55 ⁵⁸	19.32 ²¹	79.15 ¹⁵⁸
35.1	13.532	63.79	50.993	31.13	19.11	77.57
Mean Place	12.916	34.64	49.462	44.06	18.41	79.97
Sec δ, Tan δ	1.878	+1.590	1.010	-0.143	2.039	-1.777
L α, L δ	-0.02	+0.4	0.00	+0.4	+0.02	+0.4
ω α, ω δ	-0.09	-0.5	+0.01	-0.5	+0.11	-0.5
AUTHORITY	A. E.		A. E.		A. E.	

422 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.		γ Aquarii. Mag. 4.0		σ Aquarii. Mag. 4.9		η Aquarii. Mag. 4.1	
		R. A.	Dec. S.	R. A.	Dec. S.	R. A.	Dec. S.
		^h 22 ^m 17	[°] I ['] 45	^h 22 ^m 26	[°] II ['] 3	^h 22 ^m 3I	[°] 0 ['] 30
Jan.	1.2	42.653 ^s	75.18	36.333 ^s	65.96	25.944 ^s	35.50
	11.1	42.588 ⁶⁵	75.98 ⁸⁰	36.263 ⁷⁰	66.37 ⁴¹	25.870 ⁷⁴	36.33 ⁸³
	21.1	42.547 ⁴¹	76.73 ⁶⁵	36.217 ⁴⁶	66.67 ³⁰	25.817 ⁵³	37.12 ⁷⁹
	31.1	42.531 ¹⁶	77.40 ⁷⁷	36.196 ²¹	66.82 ¹⁵	25.788 ²⁹	37.83 ⁷¹
Feb.	10.1	42.542 ¹¹	77.96 ⁵⁶	36.201 ⁵	66.82 ⁰	25.786 ²	38.44 ⁶¹
	20.0	42.583 ⁴¹	78.36 ⁴⁰	36.236 ³⁵	66.65 ¹⁷	25.812 ²⁶	38.91 ⁴⁷
Mar.	1.0	42.654 ⁷¹	78.58 ²²	36.301 ⁶⁵	66.27 ³⁸	25.869 ⁵⁷	39.18 ²⁷
	11.0	42.757 ¹⁰³	78.58 ⁰	36.398 ⁹⁷	65.69 ⁵⁸	25.958 ⁸⁹	39.24 ⁶
	20.9	42.893 ¹³⁶	78.33 ²⁵	36.529 ¹³¹	64.89 ⁸⁰	26.080 ¹²²	39.05 ¹⁹
	30.9	43.063 ¹⁷⁰	77.81 ⁵²	36.693 ¹⁶⁴	63.88 ¹⁰¹	26.237 ¹⁵⁷	38.60 ⁴⁵
Apr.	9.9	43.264 ²⁰¹	77.03 ⁷⁸	36.890 ¹⁹⁷	62.65 ¹²³	26.427 ¹⁹⁰	37.87 ⁷³
	19.9	43.495 ²³¹	75.98 ¹⁰⁵	37.119 ²²⁹	61.23 ¹⁴²	26.648 ²²¹	36.87 ¹⁰⁰
	29.8	43.752 ²⁵⁷	74.70 ¹²⁸	37.375 ²⁵⁶	59.65 ¹⁵⁸	26.898 ²⁵⁰	35.62 ¹²⁵
May	9.8	44.031 ²⁷⁹	73.20 ¹⁵⁰	37.655 ²⁸⁰	57.94 ¹⁷¹	27.171 ²⁷³	34.14 ¹⁴⁸
	19.8	44.326 ²⁹⁵	71.53 ¹⁶⁷	37.952 ²⁹⁷	56.14 ¹⁸⁰	27.462 ²⁹¹	32.48 ¹⁶⁶
	29.8	44.629 ³⁰³	69.73 ¹⁸⁰	38.260 ³⁰⁸	54.31 ¹⁸³	27.764 ³⁰²	30.68 ¹⁸⁰
June	8.7	44.934 ³⁰⁵	67.87 ¹⁸⁶	38.572 ³¹²	52.51 ¹⁸⁰	28.070 ³⁰⁶	28.79 ¹⁸⁹
	18.7	45.232 ²⁹⁸	65.97 ¹⁹⁰	38.879 ³⁰⁷	50.76 ¹⁷⁵	28.371 ³⁰¹	26.86 ¹⁹³
	28.7	45.516 ²⁸⁴	64.11 ¹⁸⁶	39.173 ²⁹⁴	49.12 ¹⁶⁴	28.659 ²⁸⁸	24.94 ¹⁹²
July	8.6	45.778 ²⁶²	62.33 ¹⁷⁸	39.447 ²⁷⁴	47.64 ¹⁴⁸	28.928 ²⁶⁹	23.10 ¹⁸⁴
	18.6	46.011 ²³³	60.67 ¹⁶⁶	39.693 ²⁴⁶	46.36 ¹²⁸	29.169 ²⁴¹	21.36 ¹⁷⁴
	28.6	46.209 ¹⁹⁸	59.16 ¹⁵¹	39.905 ²¹²	45.30 ¹⁰⁶	29.378 ²⁰⁹	19.78 ¹⁵⁸
Aug.	7.6	46.369 ¹⁶⁰	57.86 ¹³⁰	40.078 ¹⁷³	44.47 ⁸³	29.548 ¹⁷⁰	18.39 ¹³⁹
	17.5	46.487 ¹¹⁸	56.77 ¹⁰⁹	40.208 ¹³⁰	43.90 ⁵⁷	29.678 ¹³⁰	17.20 ¹¹⁹
	27.5	46.561 ⁷⁴	55.90 ⁸⁷	40.296 ⁸⁸	43.58 ³²	29.766 ⁸⁸	16.24 ⁹⁶
Sept.	6.5	46.593 ³²	55.27 ⁶³	40.338 ⁴²	43.49 ⁹	29.810 ⁴⁴	15.52 ⁷²
	16.5	46.584 ⁹	54.85 ⁴²	40.340 ²	43.61 ¹²	29.814 ⁴	15.02 ⁵⁰
	26.4	46.539 ⁴⁵	54.65 ²⁰	40.303 ³⁷	43.93 ³²	29.781 ³³	14.74 ²⁸
Oct.	6.4	46.462 ⁷⁷	54.65 ⁰	40.233 ⁷⁰	44.40 ⁴⁷	29.717 ⁶⁴	14.67 ⁷
	16.4	46.360 ¹⁰²	54.82 ¹⁷	40.136 ⁹⁷	44.99 ⁵⁹	29.625 ⁹²	14.78 ¹¹
	26.3	46.241 ¹¹⁹	55.14 ³²	40.019 ¹¹⁷	45.67 ⁶⁸	29.514 ¹¹¹	15.05 ²⁷
Nov.	5.3	46.110 ¹³¹	55.59 ⁴⁵	39.889 ¹³⁰	46.39 ⁷²	29.390 ¹²⁴	15.46 ⁴¹
	15.3	45.975 ¹³⁵	56.16 ⁵⁷	39.754 ¹³⁵	47.13 ⁷⁴	29.260 ¹³⁰	16.00 ⁵⁴
	25.3	45.842 ¹³³	56.81 ⁶⁵	39.620 ¹³⁴	47.86 ⁷³	29.129 ¹³¹	16.64 ⁶⁴
Dec.	5.2	45.717 ¹²⁵	57.53 ⁷²	39.493 ¹²⁷	48.55 ⁶⁹	29.004 ¹²⁵	17.35 ⁷¹
	15.2	45.605 ¹¹²	58.30 ⁷⁷	39.378 ¹¹⁵	49.18 ⁶³	28.889 ¹¹⁵	18.13 ⁷⁸
	25.2	45.509 ⁹⁶	59.10 ⁸⁰	39.278 ¹⁰⁰	49.75 ⁵⁷	28.788 ¹⁰¹	18.94 ⁸¹
	35.2	45.433 ⁷⁶	59.89 ⁷⁹	39.198 ⁸⁰	50.22 ⁴⁷	28.704 ⁸⁴	19.76 ⁸²
Mean Place		43.877	74.59	37.627	62.26	27.085	34.73
Sec δ , Tan δ		1.000	-0.031	1.019	-0.196	1.000	-0.009
L α , L δ		0.00	+0.4	0.00	+0.4	0.00	+0.4
ω α , ω δ		0.00	-0.4	+0.01	-0.4	0.00	-0.4
AUTHORITY		A. E.				A. E.	

APPARENT PLACES OF STARS, 1924. 423

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	κ Aquarii. Mag. 5.3		ζ Pegasi. Mag. 3.6		β Gruis. Mag. 2.2	
	R. A.	Dec. S.	R. A.	Dec. N.	R. A.	Dec. S.
	^h 22 33	^m 4 36	^h 22 37	^m 10 25	^h 22 38	^m 47 16
Jan. 1.2	48.111 ^s 75	75.73 67	39.266 ^s 86	65.24 117	6.099 ^s 137	71.22 109
11.1	48.036 52	76.40 60	39.180 65	64.07 123	5.962 101	70.13 146
21.1	47.984 30	77.00 51	39.115 41	62.84 124	5.861 62	68.67 178
31.1	47.954 3	77.51 36	39.074 14	61.60 119	5.799 21	66.89 207
Feb. 10.1	47.951 24	77.87 22	39.060 14	60.41 109	5.778 23	64.82 229
20.0	47.975 56	78.09 2	39.074 46	59.32 93	5.801 68	62.53 249
Mar. 1.0	48.031 87	78.11 19	39.120 80	58.39 71	5.869 114	60.04 261
11.0	48.118 120	77.92 44	39.200 115	57.68 45	5.983 161	57.43 270
20.9	48.238 155	77.48 67	39.315 152	57.23 14	6.144 207	54.73 272
30.9	48.393 188	76.81 93	39.467 186	57.09 18	6.351 252	52.01 269
Apr. 9.9	48.581 221	75.88 118	39.653 219	57.27 52	6.603 295	49.32 261
19.9	48.802 248	74.70 138	39.872 249	57.79 86	6.898 333	46.71 248
29.8	49.050 273	73.32 158	40.121 273	58.65 117	7.231 368	44.23 227
May 9.8	49.323 292	71.74 173	40.394 292	59.82 146	7.599 392	41.96 203
19.8	49.615 303	70.01 182	40.686 303	61.28 171	7.991 409	39.93 173
29.8	49.918 307	68.19 188	40.989 307	62.99 190	8.400 418	38.20 138
June 8.7	50.225 303	66.31 187	41.296 303	64.89 205	8.818 415	36.82 101
18.7	50.528 292	64.44 183	41.599 290	66.94 213	9.233 403	35.81 61
28.7	50.820 271	62.61 171	41.889 270	69.07 217	9.636 378	35.20 19
July 8.6	51.091 245	60.90 158	42.159 243	71.24 214	10.014 345	35.01 24
18.6	51.336 212	59.32 139	42.402 211	73.38 206	10.359 302	35.25 65
28.6	51.548 175	57.93 118	42.613 172	75.44 194	10.661 251	35.90 103
Aug. 7.6	51.723 133	56.75 96	42.785 132	77.38 179	10.912 193	36.93 137
17.5	51.856 91	55.79 72	42.917 89	79.17 159	11.105 133	38.30 167
27.5	51.947 48	55.07 48	43.006 47	80.76 137	11.238 70	39.97 190
Sept. 6.5	51.995 7	54.59 25	43.053 7	82.13 115	11.308 8	41.87 204
16.5	52.002 30	54.34 4	43.060 31	83.28 91	11.316 50	43.91 212
26.4	51.972 63	54.30 14	43.029 63	84.19 66	11.266 103	46.03 209
Oct. 6.4	51.909 90	54.44 30	42.966 89	84.85 43	11.163 147	48.12 198
16.4	51.819 110	54.74 44	42.877 110	85.28 20	11.016 183	50.10 179
26.3	51.709 124	55.18 55	42.767 125	85.48 4	10.833 208	51.89 153
Nov. 5.3	51.585 130	55.73 63	42.642 132	85.44 26	10.625 222	53.42 119
15.3	51.455 130	56.36 68	42.510 134	85.18 46	10.403 226	54.61 82
25.3	51.325 125	57.04 72	42.376 131	84.72 66	10.177 220	55.43 41
Dec. 5.2	51.200 115	57.76 73	42.245 123	84.06 83	9.957 204	55.84 2
15.2	51.085 102	58.49 73	42.122 110	83.23 98	9.753 182	55.82 44
25.2	50.983 84	59.22 69	42.012 95	82.25 111	9.571 153	55.38 85
35.2	50.899	59.91	41.917	81.14	9.418	54.53
Mean Place	49.286	73.61	40.266	62.89	8.195	57.74
Sec δ , Tan δ	1.003	-0.081	1.017	+0.184	1.474	-1.083
L α , L δ	0.00	+0.4	0.00	+0.4	+0.01	+0.4
ω α , ω δ	+0.01	-0.4	-0.01	-0.4	+0.07	-0.4
AUTHORITY			A. E.		A. E.	

424 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	η Pegasi. Mag. 3.1		ϵ Gruis. Mag. 3.7		μ Pegasi. Mag. 3.7	
	R. A.	Dec. N.	R. A.	Dec. S.	R. A.	Dec. N.
	^h 22 ^m 39	[°] 29 ['] 49	^h 22 ^m 43	[°] 51 ['] 42	^h 22 ^m 46	[°] 24 ['] 11
Jan. 1.2	25.394 ¹²⁰	31.58 ¹⁶³	56.026 ¹⁶⁵	75.29 ¹²³	19.149 ¹¹⁰	65.88 ¹⁴⁷
11.1	25.274 ⁹⁷	29.95 ¹⁸⁶	55.861 ¹²⁵	74.06 ¹⁶²	19.039 ⁹⁰	64.41 ¹⁶⁶
21.1	25.177 ⁶⁹	28.09 ²⁰¹	55.736 ⁸³	72.44 ¹⁹⁷	18.949 ⁶⁵	62.75 ¹⁷⁷
31.1	25.108 ³⁹	26.08 ²⁰⁹	55.653 ³⁷	70.47 ²²⁷	18.884 ³⁶	60.98 ¹⁸³
Feb. 10.1	25.069 ³	23.99 ²⁰⁸	55.616 ¹⁰	68.20 ²⁵¹	18.848 ⁵	59.15 ¹⁷⁹
20.0	25.066 ³⁵	21.91 ¹⁹⁷	55.626 ⁶⁰	65.69 ²⁷⁰	18.843 ³⁰	57.36 ¹⁶⁸
Mar. 1.0	25.101 ⁷⁵	19.94 ¹⁷⁸	55.686 ¹¹¹	62.99 ²⁸²	18.873 ⁶⁹	55.68 ¹⁴⁸
11.0	25.176 ¹¹⁸	18.16 ¹⁵¹	55.797 ¹⁶³	60.17 ²⁹⁰	18.942 ¹⁰⁸	54.20 ¹²³
20.9	25.294 ¹⁶⁰	16.65 ¹¹⁷	55.960 ²¹³	57.27 ²⁹⁰	19.050 ¹⁴⁸	52.97 ⁸⁹
30.9	25.454 ²⁰⁰	15.48 ⁷⁸	56.173 ²⁶³	54.37 ²⁸⁶	19.198 ¹⁸⁸	52.08 ⁵³
Apr. 9.9	25.654 ²³⁹	14.70 ³³	56.436 ³¹⁰	51.51 ²⁷⁵	19.386 ²²⁴	51.55 ¹²
19.9	25.893 ²⁷¹	14.37 ¹¹	56.746 ³⁵²	48.76 ²⁵⁸	19.610 ²⁵⁷	51.43 ²⁹
29.8	26.164 ²⁹⁸	14.48 ⁵⁷	57.098 ³⁸⁸	46.18 ²³⁶	19.867 ²⁸⁵	51.72 ⁷²
May 9.8	26.462 ³¹⁷	15.05 ¹⁰¹	57.486 ⁴¹⁸	43.82 ²⁰⁷	20.152 ³⁰⁴	52.44 ¹¹¹
19.8	26.779 ³²⁹	16.06 ¹⁴²	57.904 ⁴³⁸	41.75 ¹⁷⁴	20.456 ³¹⁷	53.55 ¹⁴⁷
29.8	27.108 ³³¹	17.48 ¹⁷⁸	58.342 ⁴⁴⁸	40.01 ¹³⁷	20.773 ³²²	55.02 ¹⁸⁰
June 8.7	27.439 ³²⁵	19.26 ²¹⁰	58.790 ⁴⁴⁷	38.64 ⁹⁷	21.095 ³¹⁸	56.82 ²⁰⁷
18.7	27.764 ³⁰⁹	21.36 ²³⁶	59.237 ⁴³⁵	37.67 ⁵³	21.413 ³⁰⁴	58.89 ²²⁸
28.7	28.073 ²⁸⁷	23.72 ²⁵⁵	59.672 ⁴¹⁰	37.14 ⁸	21.717 ²⁸³	61.17 ²⁴³
July 8.6	28.360 ²⁵⁵	26.27 ²⁶⁷	60.082 ³⁷⁵	37.06 ³⁷	22.000 ²⁵⁵	63.60 ²⁵³
18.6	28.615 ²¹⁹	28.94 ²⁷⁴	60.457 ³³¹	37.43 ⁷⁹	22.255 ²²¹	66.13 ²⁵⁴
28.6	28.834 ¹⁷⁷	31.68 ²⁷⁴	60.788 ²⁷⁶	38.22 ¹²⁰	22.476 ¹⁸¹	68.67 ²⁵³
Aug. 7.6	29.011 ¹³²	34.42 ²⁶⁸	61.064 ²¹⁵	39.42 ¹⁵⁶	22.657 ¹³⁹	71.20 ²⁴³
17.5	29.143 ⁸⁶	37.10 ²⁵⁶	61.279 ¹⁵⁰	40.98 ¹⁸⁶	22.796 ⁹⁵	73.63 ²³¹
27.5	29.229 ⁴¹	39.66 ²⁴¹	61.429 ⁸¹	42.84 ²⁰⁹	22.891 ⁵¹	75.94 ²¹³
Sept. 6.5	29.270 ³	42.07 ²¹⁹	61.510 ¹⁴	44.93 ²²⁴	22.942 ⁹	78.07 ¹⁹²
16.5	29.267 ⁴⁴	44.26 ¹⁹⁵	61.524 ⁵⁰	47.17 ²³⁰	22.951 ³⁰	79.99 ¹⁶⁸
26.4	29.223 ⁷⁹	46.21 ¹⁶⁷	61.474 ¹⁰⁹	49.47 ²²⁶	22.921 ⁶⁵	81.67 ¹⁴¹
Oct. 6.4	29.144 ¹⁰⁹	47.88 ¹³⁶	61.365 ¹⁶⁰	51.73 ²¹⁴	22.856 ⁹³	83.08 ¹¹²
16.4	29.035 ¹³³	49.24 ¹⁰³	61.205 ²⁰⁰	53.87 ¹⁹³	22.763 ¹¹⁷	84.20 ⁸³
26.3	28.902 ¹⁵⁰	50.27 ⁶⁸	61.005 ²³⁰	55.80 ¹⁶²	22.646 ¹³⁴	85.03 ⁵¹
Nov. 5.3	28.752 ¹⁶¹	50.95 ³²	60.775 ²⁴⁸	57.42 ¹²⁷	22.512 ¹⁴⁵	85.54 ¹⁸
15.3	28.591 ¹⁶⁶	51.27 ⁶	60.527 ²⁵⁵	58.69 ⁸⁵	22.367 ¹⁵⁰	85.72 ¹⁴
25.3	28.425 ¹⁶⁵	51.21 ⁸⁰	60.272 ²⁵⁰	59.54 ⁴⁰	22.217 ¹⁴⁹	85.58 ⁴⁶
Dec. 5.2	28.260 ¹⁵⁹	50.77 ⁴⁴	60.022 ²³⁵	59.94 ⁶	22.068 ¹⁴⁴	85.12 ⁷⁸
15.2	28.101 ¹⁴⁷	49.97 ¹¹⁵	59.787 ²¹²	59.88 ⁵²	21.924 ¹³⁴	84.34 ¹⁰⁷
25.2	27.954 ¹³¹	48.82 ¹⁴⁵	59.575 ¹⁸²	59.36 ⁹⁸	21.790 ¹²¹	83.27 ¹³³
35.2	27.823	47.37	59.393	58.38	21.669	81.94
Mean Place	26.234	23.49	58.282	60.56	19.985	59.57
Sec δ , Tan δ	1.153	+0.573	1.614	-1.267	1.096	+0.449
L α , L δ	-0.01	+0.4	+0.01	+0.4	0.00	+0.4
ω α , ω δ	-0.04	-0.3	+0.08	-0.3	-0.03	-0.3
AUTHORITY	A. E.		A. E.		A. N.	

APPARENT PLACES OF STARS, 1924. 425

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	λ Aquarii. Mag. 3·8		δ Aquarii. Mag. 3·5		α Piscis Australis. Mag. 1·3	
	R. A.	Dec. S.	R. A.	Dec. S.	R. A.	Dec. S.
	^h 22 ^m 48 ^s	[°] 7 ['] 58	^h 22 ^m 50 ^s	[°] 16 ['] 13	^h 22 ^m 53 ^s	[°] 30 ['] 1
Jan. 1·2	37·886 ₈₃	67·76 ₅₄	35·864 ₈₇	37·84 ₂₄	25·814 ₁₀₃	42·30 ₂₉
11·1	37·803 ₆₃	68·30 ₄₃	35·777 ₆₆	38·08 ₆	25·711 ₇₉	42·01 ₅₇
21·1	37·740 ₄₁	68·73 ₃₁	35·711 ₄₃	38·14 ₁₂	25·632 ₅₃	41·44 ₈₄
31·1	37·699 ₁₇	69·04 ₁₆	35·668 ₁₈	38·02 ₃₁	25·579 ₂₄	40·60 ₁₁₀
Feb. 10·1	37·682 ₁₂	69·20 ₂	35·650 ₁₁	37·71 ₅₂	25·555 ₈	39·50 ₁₃₃
20·0	37·694 ₄₁	69·18 ₂₁	35·661 ₄₂	37·19 ₇₂	25·563 ₄₂	38·17 ₁₅₅
Mar. 1·0	37·735 ₇₃	68·97 ₄₃	35·703 ₇₄	36·47 ₉₄	25·605 ₇₈	36·62 ₁₇₅
11·0	37·808 ₁₀₇	68·54 ₆₅	35·777 ₁₀₈	35·53 ₁₁₄	25·683 ₁₁₅	34·87 ₁₉₂
21·0	37·915 ₁₄₃	67·89 ₈₉	35·885 ₁₄₄	34·39 ₁₃₄	25·798 ₁₅₄	32·95 ₂₀₆
30·9	38·058 ₁₇₇	67·00 ₁₁₂	36·029 ₁₈₀	33·05 ₁₅₃	25·952 ₁₉₂	30·89 ₂₁₅
Apr. 9·9	38·235 ₂₁₁	65·88 ₁₃₃	36·209 ₂₁₄	31·52 ₁₆₉	26·144 ₂₃₀	28·74 ₂₂₁
19·9	38·446 ₂₄₁	64·55 ₁₅₃	36·423 ₂₄₅	29·83 ₁₈₁	26·374 ₂₆₃	26·53 ₂₂₃
29·8	38·687 ₂₆₇	63·02 ₁₆₉	36·668 ₂₇₃	28·02 ₁₈₉	26·637 ₂₉₃	24·30 ₂₂₀
May 9·8	38·954 ₂₈₈	61·33 ₁₈₁	36·941 ₂₉₄	26·13 ₁₉₄	26·930 ₃₁₇	22·10 ₂₁₀
19·8	39·242 ₃₀₃	59·52 ₁₈₈	37·235 ₃₀₉	24·19 ₁₉₃	27·247 ₃₃₅	20·00 ₁₉₇
29·8	39·545 ₃₀₉	57·64 ₁₉₀	37·544 ₃₁₇	22·26 ₁₈₇	27·582 ₃₄₄	18·03 ₁₇₆
June 8·7	39·854 ₃₀₈	55·74 ₁₈₆	37·861 ₃₁₇	20·39 ₁₇₆	27·926 ₃₄₄	16·27 ₁₅₃
18·7	40·162 ₂₉₈	53·88 ₁₇₉	38·178 ₃₀₈	18·63 ₁₆₀	28·270 ₃₃₆	14·74 ₁₂₆
28·7	40·460 ₂₈₁	52·09 ₁₆₆	38·486 ₂₉₀	17·03 ₁₄₀	28·606 ₃₂₀	13·48 ₉₄
July 8·7	40·741 ₂₅₇	50·43 ₁₄₈	38·776 ₂₆₆	15·63 ₁₁₆	28·926 ₂₉₄	12·54 ₆₁
18·6	40·998 ₂₂₆	48·95 ₁₂₈	39·042 ₂₃₅	14·47 ₉₀	29·220 ₂₅₉	11·93 ₂₆
28·6	41·224 ₁₈₉	47·67 ₁₀₅	39·277 ₁₉₈	13·57 ₆₃	29·479 ₂₁₉	11·67 ₈
Aug. 7·6	41·413 ₁₄₉	46·62 ₈₀	39·475 ₁₅₇	12·94 ₃₄	29·698 ₁₇₇	11·75 ₄₂
17·5	41·562 ₁₀₇	45·82 ₅₅	39·632 ₁₁₃	12·60 ₇	29·875 ₁₂₈	12·17 ₇₂
27·5	41·669 ₆₄	45·27 ₃₀	39·745 ₆₉	12·53 ₁₉	30·003 ₇₉	12·89 ₉₉
Sept. 6·5	41·733 ₂₃	44·97 ₇	39·814 ₂₆	12·72 ₄₂	30·082 ₃₁	13·88 ₁₂₀
16·5	41·756 ₁₆	44·90 ₁₄	39·840 ₁₅	13·14 ₆₁	30·113 ₁₅	15·08 ₁₃₇
26·4	41·740 ₅₀	45·04 ₃₂	39·825 ₅₀	13·75 ₇₇	30·098 ₅₆	16·45 ₁₄₅
Oct. 6·4	41·690 ₇₈	45·36 ₄₇	39·775 ₈₀	14·52 ₈₇	30·042 ₉₁	17·90 ₁₄₉
16·4	41·612 ₁₀₁	45·83 ₅₉	39·695 ₁₀₄	15·39 ₉₂	29·951 ₁₁₈	19·39 ₁₄₄
26·4	41·511 ₁₁₆	46·42 ₆₇	39·591 ₁₂₁	16·31 ₉₅	29·833 ₁₃₉	20·83 ₁₃₄
Nov. 5·3	41·395 ₁₂₅	47·09 ₇₂	39·470 ₁₃₁	17·26 ₉₁	29·694 ₁₅₁	22·17 ₁₁₇
15·3	41·270 ₁₂₈	47·81 ₇₄	39·339 ₁₃₃	18·17 ₈₅	29·543 ₁₅₆	23·34 ₉₇
25·3	41·142 ₁₂₅	48·55 ₇₃	39·206 ₁₃₂	19·02 ₇₄	29·387 ₁₅₃	24·31 ₇₂
Dec. 5·2	41·017 ₁₁₉	49·28 ₇₁	39·074 ₁₂₃	19·76 ₆₃	29·234 ₁₄₆	25·03 ₄₆
15·2	40·898 ₁₀₆	49·99 ₆₆	38·951 ₁₁₂	20·39 ₄₉	29·088 ₁₃₁	25·49 ₁₇
25·2	40·792 ₉₁	50·65 ₅₈	38·839 ₉₅	20·88 ₃₃	28·957 ₁₁₂	25·66 ₁₂
35·2	40·701	51·23	38·744	21·21	28·845	25·54
Mean Place	39·027	63·92	37·107	31·38	27·288	31·77
Sec δ, Tan δ	1·010	−0·140	1·041	−0·291	1·155	−0·578
L α, L δ	0·00	+0·4	0·00	+0·4	0·00	+0·4
ω α, ω δ	+0·01	−0·3	+0·02	−0·3	+0·04	−0·3
AUTHORITY	A. E.		A. E.		A. E.	

426 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	β Piscium. Mag. 4.6		β Pegasi. Mag. 2.2-2.7		α Pegasi. Mag. 2.6	
	R. A.	Dec. N.	R. A.	Dec. N.	R. A.	Dec. N.
	<div>h m 22 59</div>	<div>° ' " 3 24</div>	<div>h m 23 0</div>	<div>° ' " 27 40</div>	<div>h m 23 0</div>	<div>° ' " 14 47</div>
Jan. 1.2	59.612 ₉₃	37.43 ₈₉	4.518 ₁₂₅	19.72 ₁₄₄	57.575 ₁₀₃	48.78 ₁₁₉
11.2	59.519 ₇₄	36.54 ₉₀	4.393 ₁₀₆	18.28 ₁₆₇	57.472 ₈₅	47.59 ₁₃₀
21.1	59.445 ₅₄	35.64 ₈₅	4.287 ₈₂	16.61 ₁₈₂	57.387 ₆₄	46.29 ₁₃₄
31.1	59.391 ₃₁	34.79 ₇₇	4.205 ₅₅	14.79 ₁₉₀	57.323 ₄₀	44.95 ₁₃₄
Feb. 10.1	59.360 ₄	34.02 ₆₅	4.150 ₂₃	12.89 ₁₉₀	57.283 ₁₂	43.61 ₁₂₈
20.0	59.356 ₂₆	33.37 ₄₈	4.127 ₁₄	10.99 ₁₈₃	57.271 ₂₁	42.33 ₁₁₄
Mar. 1.0	59.382 ₅₉	32.89 ₂₇	4.141 ₅₃	9.16 ₁₆₆	57.292 ₅₅	41.19 ₉₅
11.0	59.441 ₉₃	32.62 ₃	4.194 ₉₅	7.50 ₁₄₁	57.347 ₉₂	40.24 ₇₀
21.0	59.534 ₁₂₉	32.59 ₂₅	4.289 ₁₃₇	6.09 ₁₁₀	57.439 ₁₃₀	39.54 ₄₁
30.9	59.663 ₁₆₆	32.84 ₅₃	4.426 ₁₇₉	4.99 ₇₄	57.569 ₁₆₈	39.13 ₈
Apr. 9.9	59.829 ₂₀₁	33.37 ₈₂	4.605 ₂₁₉	4.25 ₃₃	57.737 ₂₀₄	39.05 ₂₇
19.9	60.030 ₂₃₂	34.19 ₁₁₁	4.824 ₂₅₄	3.92 ₉	57.941 ₂₃₇	39.32 ₆₃
29.9	60.262 ₂₆₀	35.30 ₁₃₅	5.078 ₂₈₄	4.01 ₅₂	58.178 ₂₆₆	39.95 ₉₇
May 9.8	60.522 ₂₈₂	36.65 ₁₅₈	5.362 ₃₀₈	4.53 ₉₅	58.444 ₂₈₈	40.92 ₁₂₉
19.8	60.804 ₂₉₈	38.23 ₁₇₈	5.670 ₃₂₂	5.48 ₁₃₄	58.732 ₃₀₃	42.21 ₁₅₈
29.8	61.102 ₃₀₆	40.01 ₁₉₀	5.992 ₃₂₈	6.82 ₁₆₉	59.035 ₃₁₁	43.79 ₁₈₃
June 8.7	61.408 ₃₀₆	41.91 ₁₉₉	6.320 ₃₂₇	8.51 ₂₀₀	59.346 ₃₁₀	45.62 ₂₀₂
18.7	61.714 ₂₉₇	43.90 ₂₀₁	6.647 ₃₁₆	10.51 ₂₂₄	59.656 ₃₀₁	47.64 ₂₁₅
28.7	62.011 ₂₈₀	45.91 ₁₉₉	6.963 ₂₉₆	12.75 ₂₄₄	59.957 ₂₈₃	49.79 ₂₂₃
July 8.7	62.291 ₂₅₈	47.90 ₁₉₁	7.259 ₂₆₈	15.19 ₂₅₆	60.240 ₂₅₉	52.02 ₂₂₅
18.6	62.549 ₂₂₇	49.81 ₁₇₉	7.527 ₂₃₆	17.75 ₂₆₃	60.499 ₂₂₉	54.27 ₂₂₂
28.6	62.776 ₁₉₃	51.60 ₁₆₃	7.763 ₁₉₇	20.38 ₂₆₃	60.728 ₁₉₂	56.49 ₂₁₄
Aug. 7.6	62.969 ₁₅₄	53.23 ₁₄₄	7.960 ₁₅₅	23.01 ₂₅₈	60.920 ₁₅₃	58.63 ₂₀₁
17.6	63.123 ₁₁₂	54.67 ₁₂₂	8.115 ₁₁₀	25.59 ₂₄₈	61.073 ₁₁₂	60.64 ₁₈₄
27.5	63.235 ₇₁	55.89 ₁₀₀	8.225 ₆₆	28.07 ₂₃₂	61.185 ₇₀	62.48 ₁₆₅
Sept. 6.5	63.306 ₃₁	56.89 ₇₆	8.291 ₂₃	30.39 ₂₁₃	61.255 ₂₉	64.13 ₁₄₃
16.5	63.337 ₇	57.65 ₅₃	8.314 ₁₇	32.52 ₁₉₀	61.284 ₉	65.56 ₁₁₉
26.4	63.330 ₄₀	58.18 ₃₁	8.297 ₅₄	34.42 ₁₆₄	61.275 ₄₃	66.75 ₉₅
Oct. 6.4	63.290 ₆₈	58.49 ₉	8.243 ₈₄	36.06 ₁₃₆	61.232 ₇₂	67.70 ₆₉
16.4	63.222 ₉₁	58.58 ₈	8.159 ₁₁₁	37.42 ₁₀₄	61.160 ₉₅	68.39 ₄₄
26.4	63.131 ₁₀₈	58.50 ₂₇	8.048 ₁₂₉	38.46 ₇₂	61.065 ₁₁₃	68.83 ₁₉
Nov. 5.3	63.023 ₁₁₉	58.23 ₄₁	7.919 ₁₄₄	39.18 ₃₉	60.952 ₁₂₄	69.02 ₅
15.3	62.904 ₁₂₄	57.82 ₅₆	7.775 ₁₅₂	39.57 ₄	60.828 ₁₃₁	68.97 ₂₉
25.3	62.780 ₁₂₃	57.26 ₆₆	7.623 ₁₅₄	39.61 ₃₁	60.697 ₁₃₂	68.68 ₅₂
Dec. 5.3	62.657 ₁₁₉	56.60 ₇₅	7.469 ₁₅₂	39.30 ₆₆	60.565 ₁₂₉	68.16 ₇₄
15.2	62.538 ₁₁₁	55.85 ₈₄	7.317 ₁₄₅	38.64 ₉₈	60.436 ₁₂₁	67.42 ₉₄
25.2	62.427 ₉₉	55.01 ₈₇	7.172 ₁₃₄	37.66 ₁₂₇	60.315 ₁₀₉	66.48 ₁₁₀
35.2	62.328	54.14	7.038	36.39	60.206	65.38
Mean Place	60.561	38.11	5.249	12.70	58.410	45.80
Sec δ , Tan δ	1.002	+0.060	1.129	+0.524	1.034	+0.264
L α , L δ	0.00	+0.4	0.00	+0.4	0.00	+0.4
ω α , ω δ	-0.01	-0.3	-0.03	-0.3	-0.02	-0.3
AUTHORITY			A. E.		A. E.	

APPARENT PLACES OF STARS, 1924. 427

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	ϵ^2 Aquarii. Mag. 3.8		γ Tucanæ. Mag. 4.1		γ Piscium. Mag. 3.9	
	R. A.	Dec. S.	R. A.	Dec. S.	R. A.	Dec. N.
	^h 23 _s 5	[°] 21 _' 34	^h 23 _s 12	[°] 58 _' 38	^h 23 _s 13	[°] 2 _' 51
Jan. 1.2	22.542 ₁₀₀	75.87 ₇	57.781 ₂₄₉	88.92 ₁₂₄	12.619 ₉₇	58.78 ₈₅
11.2	22.442 ₈₀	75.94 ₁₅	57.532 ₂₀₉	87.68 ₁₇₀	12.522 ₈₁	57.93 ₈₅
21.1	22.362 ₅₈	75.79 ₃₉	57.323 ₁₆₃	85.98 ₂₁₂	12.441 ₆₂	57.08 ₈₀
31.1	22.304 ₃₃	75.40 ₆₁	57.160 ₁₁₂	83.86 ₂₄₇	12.379 ₄₁	56.28 ₇₁
Feb. 10.1	22.271 ₅	74.79 ₈₄	57.048 ₅₆	81.39 ₂₇₆	12.338 ₁₅	55.57 ₆₀
20.0	22.266 ₂₆	73.95 ₁₀₆	56.992 ₂	78.63 ₂₉₉	12.323 ₁₄	54.97 ₄₂
Mar. 1.0	22.292 ₆₀	72.89 ₁₂₇	56.994 ₆₂	75.64 ₃₁₅	12.337 ₄₆	54.55 ₂₂
11.0	22.352 ₉₅	71.62 ₁₄₈	57.056 ₁₂₅	72.49 ₃₂₄	12.383 ₈₁	54.33 ₁
21.0	22.447 ₁₃₂	70.14 ₁₆₇	57.181 ₁₈₇	69.25 ₃₂₅	12.464 ₁₁₈	54.34 ₂₈
30.9	22.579 ₁₇₀	68.47 ₁₈₂	57.368 ₂₄₉	66.00 ₃₂₂	12.582 ₁₅₅	54.62 ₅₆
Apr. 9.9	22.749 ₂₀₆	66.65 ₁₉₅	57.617 ₃₀₉	62.78 ₃₁₀	12.737 ₁₉₁	55.18 ₈₄
19.9	22.955 ₂₄₀	64.70 ₂₀₄	57.926 ₃₆₄	59.68 ₂₉₂	12.928 ₂₂₄	56.02 ₁₁₁
29.9	23.195 ₂₇₀	62.66 ₂₀₉	58.290 ₄₁₂	56.76 ₂₆₇	13.152 ₂₅₄	57.13 ₁₃₇
May 9.8	23.465 ₂₉₅	60.57 ₂₀₈	58.702 ₄₅₄	54.09 ₂₃₇	13.406 ₂₇₈	58.50 ₁₅₉
19.8	23.760 ₃₁₃	58.49 ₂₀₃	59.156 ₄₈₅	51.72 ₂₀₁	13.684 ₂₉₅	60.09 ₁₇₆
29.8	24.073 ₃₂₄	56.46 ₁₉₁	59.641 ₅₀₆	49.71 ₁₅₉	13.979 ₃₀₇	61.85 ₁₉₀
June 8.7	24.397 ₃₂₆	54.55 ₁₇₆	60.147 ₅₁₃	48.12 ₁₁₅	14.286 ₃₀₇	63.75 ₁₉₉
18.7	24.723 ₃₂₀	52.79 ₁₅₅	60.660 ₅₀₇	46.97 ₆₇	14.593 ₃₀₂	65.74 ₂₀₀
28.7	25.043 ₃₀₅	51.24 ₁₃₀	61.167 ₄₈₈	46.30 ₁₇	14.895 ₂₈₇	67.74 ₁₉₉
July 8.7	25.348 ₂₈₂	49.94 ₁₀₃	61.655 ₄₅₇	46.13 ₃₂	15.182 ₂₆₆	69.73 ₁₉₀
18.6	25.630 ₂₅₃	48.91 ₇₂	62.112 ₄₁₁	46.45 ₈₁	15.448 ₂₃₈	71.63 ₁₇₈
28.6	25.883 ₂₁₆	48.19 ₄₁	62.523 ₃₅₆	47.26 ₁₂₇	15.686 ₂₀₅	73.41 ₁₆₂
Aug. 7.6	26.099 ₁₇₅	47.78 ₁₀	62.879 ₂₉₀	48.53 ₁₆₈	15.891 ₁₆₇	75.03 ₁₄₂
17.6	26.274 ₁₃₂	47.68 ₂₁	63.169 ₂₁₇	50.21 ₂₀₃	16.058 ₁₂₆	76.45 ₁₂₁
27.5	26.406 ₈₆	47.89 ₄₈	63.386 ₁₃₉	52.24 ₂₃₃	16.184 ₈₇	77.66 ₉₈
Sept. 6.5	26.492 ₄₂	48.37 ₇₂	63.525 ₆₀	54.57 ₂₅₀	16.271 ₄₆	78.64 ₇₄
16.5	26.534 ₀	49.09 ₉₂	63.585 ₁₈	57.07 ₂₆₀	16.317 ₈	79.38 ₅₁
26.4	26.534 ₃₈	50.01 ₁₀₇	63.567 ₉₂	59.67 ₂₅₉	16.325 ₂₆	79.89 ₂₈
Oct. 6.4	26.496 ₇₁	51.08 ₁₁₅	63.475 ₁₅₈	62.26 ₂₄₉	16.299 ₅₅	80.17 ₈
16.4	26.425 ₉₈	52.23 ₁₁₉	63.317 ₂₁₄	64.75 ₂₂₇	16.244 ₇₉	80.25 ₁₁
26.4	26.327 ₁₁₈	53.42 ₁₁₆	63.103 ₂₅₉	67.02 ₁₉₆	16.165 ₉₇	80.14 ₂₇
Nov. 5.3	26.209 ₁₃₀	54.58 ₁₀₈	62.844 ₂₉₂	68.98 ₁₅₈	16.068 ₁₁₀	79.87 ₄₃
15.3	26.079 ₁₃₇	55.66 ₉₆	62.552 ₃₁₁	70.56 ₁₁₃	15.958 ₁₁₈	79.44 ₅₅
25.3	25.942 ₁₃₇	56.62 ₈₁	62.241 ₃₁₆	71.69 ₆₃	15.840 ₁₁₈	78.89 ₆₅
Dec. 5.3	25.805 ₁₃₁	57.43 ₆₃	61.925 ₃₁₁	72.32 ₁₀	15.722 ₁₁₈	78.24 ₇₄
15.2	25.674 ₁₂₁	58.06 ₄₃	61.614 ₂₉₂	72.42 ₄₂	15.604 ₁₁₂	77.50 ₈₀
25.2	25.553 ₁₀₈	58.49 ₁₉	61.322 ₂₆₆	72.00 ₉₄	15.492 ₁₀₂	76.70 ₈₄
35.2	25.445	58.68	61.056	71.06	15.390	75.86
Mean Place	23.785	67.03	60.164	70.99	13.498	60.14
Sec δ , Tan δ	1.075	-0.396	1.922	-1.642	1.061	+0.050
L α , L δ	0.00	+0.4	+0.01	+0.4	0.00	+0.4
ω α , ω δ	+0.03	-0.2	+0.11	-0.2	0.00	-0.2
AUTHORITY	A. E.		A. E.		A. N.	

428 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	ψ^3 Aquarii. Mag. 5.2		τ Pegasi. Mag. 4.7		κ Piscium. Mag. 4.9	
	R. A.	Dec. S.	R. A.	Dec. N.	R. A.	Dec. N.
	^h 23 ^m 14	[°] 10 ['] 1	^h 23 ^m 16	[°] 23 ['] 19	^h 23 ^m 23	[°] 0 ['] 50
Jan. 1.2	59.537 ₉₈	41.25 ₄₈	51.683 ₁₂₄	31.83 ₁₂₇	1.335 ₁₀₁	19.46 ₈₀
11.2	59.439 ₈₁	41.73 ₃₆	51.559 ₁₀₈	30.56 ₁₄₅	1.234 ₈₈	18.66 ₇₆
21.1	59.358 ₆₃	42.09 ₂₁	51.451 ₈₈	29.11 ₁₅₉	1.146 ₇₀	17.90 ₆₉
31.1	59.295 ₄₀	42.30 ₂	51.363 ₆₄	27.52 ₁₆₅	1.076 ₄₉	17.21 ₆₀
Feb. 10.1	59.255 ₁₅	42.32 ₁₅	51.299 ₃₅	25.87 ₁₆₅	1.027 ₂₅	16.61 ₄₇
20.1	59.240 ₁₅	42.17 ₃₆	51.264 ₁	24.22 ₁₅₇	1.002 ₄	16.14 ₃₀
Mar. 1.0	59.255 ₄₅	41.81 ₅₇	51.263 ₃₅	22.65 ₁₄₂	1.006 ₃₆	15.84 ₉
11.0	59.300 ₈₁	41.24 ₈₁	51.298 ₇₆	21.23 ₁₁₉	1.042 ₇₁	15.75 ₁₄
21.0	59.381 ₁₁₆	40.43 ₁₀₃	51.374 ₁₁₇	20.04 ₉₀	1.113 ₁₀₇	15.89 ₄₀
30.9	59.497 ₁₅₄	39.40 ₁₂₅	51.491 ₁₅₉	19.14 ₅₇	1.220 ₁₄₅	16.29 ₆₇
Apr. 9.9	59.651 ₁₉₀	38.15 ₁₄₇	51.650 ₁₉₉	18.57 ₁₉	1.365 ₁₈₁	16.96 ₉₃
19.9	59.841 ₂₂₃	36.68 ₁₆₅	51.849 ₂₃₆	18.38 ₂₀	1.546 ₂₁₆	17.89 ₁₂₀
29.9	60.064 ₂₅₄	35.03 ₁₇₉	52.085 ₂₆₇	18.58 ₆₀	1.762 ₂₄₇	19.09 ₁₄₃
May 9.8	60.318 ₂₇₉	33.24 ₁₉₀	52.352 ₂₉₃	19.18 ₉₈	2.009 ₂₇₃	20.52 ₁₆₃
19.8	60.597 ₂₉₇	31.34 ₁₉₇	52.645 ₃₁₁	20.16 ₁₃₃	2.282 ₂₉₂	22.15 ₁₈₀
29.8	60.894 ₃₀₉	29.37 ₁₉₆	52.956 ₃₂₀	21.49 ₁₆₆	2.574 ₃₀₃	23.95 ₁₉₂
June 8.8	61.203 ₃₁₂	27.41 ₁₉₂	53.276 ₃₂₂	23.15 ₁₉₃	2.877 ₃₀₇	25.87 ₁₉₇
18.7	61.515 ₃₀₇	25.49 ₁₈₃	53.598 ₃₁₄	25.08 ₂₁₅	3.184 ₃₀₃	27.84 ₁₉₉
28.7	61.822 ₂₉₃	23.66 ₁₆₈	53.912 ₂₉₉	27.23 ₂₃₁	3.487 ₂₉₀	29.83 ₁₉₄
July 8.7	62.115 ₂₇₃	21.98 ₁₄₉	54.211 ₂₇₅	29.54 ₂₄₂	3.777 ₂₇₁	31.77 ₁₈₆
18.6	62.388 ₂₄₅	20.49 ₁₂₇	54.486 ₂₄₄	31.96 ₂₄₆	4.048 ₂₄₄	33.63 ₁₇₁
28.6	62.633 ₂₁₁	19.22 ₁₀₁	54.730 ₂₁₀	34.42 ₂₄₄	4.292 ₂₁₁	35.34 ₁₅₄
Aug. 7.6	62.844 ₁₇₄	18.21 ₇₅	54.940 ₁₆₉	36.86 ₂₃₈	4.503 ₁₇₅	36.88 ₁₃₃
17.6	63.018 ₁₃₂	17.46 ₄₈	55.109 ₁₂₈	39.24 ₂₂₇	4.678 ₁₃₆	38.21 ₁₁₀
27.5	63.150 ₉₁	16.98 ₂₂	55.237 ₈₆	41.51 ₂₁₁	4.814 ₉₅	39.31 ₈₇
Sept. 6.5	63.241 ₄₉	16.76 ₄	55.323 ₄₄	43.62 ₁₉₁	4.909 ₅₅	40.18 ₆₂
16.5	63.290 ₁₀	16.80 ₂₆	55.367 ₄	45.53 ₁₇₀	4.964 ₁₇	40.80 ₃₉
26.5	63.300 ₂₆	17.06 ₄₅	55.371 ₃₂	47.23 ₁₄₅	4.981 ₁₇	41.19 ₁₇
Oct. 6.4	63.274 ₅₆	17.51 ₆₁	55.339 ₆₃	48.68 ₁₁₈	4.964 ₄₇	41.36 ₃
16.4	63.218 ₈₁	18.12 ₇₂	55.276 ₈₉	49.86 ₉₁	4.917 ₇₂	41.33 ₂₁
26.4	63.137 ₁₀₁	18.84 ₇₉	55.187 ₁₁₀	50.77 ₆₁	4.845 ₉₂	41.12 ₃₇
Nov. 5.3	63.036 ₁₁₃	19.63 ₈₃	55.077 ₁₂₆	51.38 ₃₂	4.753 ₁₀₆	40.75 ₄₉
15.3	62.923 ₁₂₁	20.46 ₈₂	54.951 ₁₃₅	51.70 ₁	4.647 ₁₁₅	40.26 ₆₀
25.3	62.802 ₁₂₃	21.28 ₇₉	54.816 ₁₄₁	51.71 ₂₉	4.532 ₁₁₈	39.66 ₆₈
Dec. 5.3	62.679 ₁₂₀	22.07 ₇₄	54.675 ₁₄₁	51.42 ₅₉	4.414 ₁₁₈	38.98 ₇₄
15.2	62.559 ₁₁₄	22.81 ₆₅	54.534 ₁₃₇	50.83 ₈₇	4.296 ₁₁₄	38.24 ₇₈
25.2	62.445 ₁₀₃	23.46 ₅₆	54.397 ₁₃₀	49.96 ₁₁₂	4.182 ₁₀₆	37.46 ₇₉
35.2	62.342	24.02	54.267	48.84	4.076	36.67
Mean Place	60.556	35.54	52.350	26.60	2.185	21.90
Sec δ , Tan δ	1.016	-0.177	1.089	+0.431	1.000	+0.015
L α , L δ	0.00	+0.4	0.00	+0.4	0.00	+0.4
ω α , ω δ	+0.01	-0.2	-0.03	-0.2	0.00	-0.2
AUTHORITY			A. E.		A. E.	

APPARENT PLACES OF STARS, 1924. 429

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	♌ Phœnicis. Mag. 4·8		♊ Piscium. Mag. 4·3		γ Cephei. Mag. 3·4	
	R. A.	Dec. S.	R. A.	Dec. N.	R. A.	Dec. N.
	<div>h m 23 30</div>	<div>° ′ 43 1</div>	<div>h m 23 36</div>	<div>° ′ 5 12</div>	<div>h m 23 36</div>	<div>° ′ 77 12</div>
Jan. 1·2	57·885 ₁₆₆	83·98 ₅₃	1·686 ₁₀₈	49·80 ₈₈	13·62 ₉₀	46·54 ₉₀
11·2	57·719 ₁₄₃	83·45 ₉₄	1·578 ₉₆	48·92 ₈₉	12·72 ₈₃	45·64 ₁₅₀
21·2	57·576 ₁₁₇	82·51 ₁₃₁	1·482 ₈₁	48·03 ₈₆	11·89 ₇₄	44·14 ₂₀₃
31·1	57·459 ₈₆	81·20 ₁₆₇	1·401 ₆₂	47·17 ₈₀	11·15 ₆₂	42·11 ₂₄₉
Feb. 10·1	57·373 ₅₁	79·53 ₁₉₈	1·339 ₃₈	46·37 ₇₀	10·53 ₄₈	39·62 ₂₈₃
20·1	57·322 ₁₂	77·55 ₂₂₄	1·301 ₁₀	45·67 ₅₅	10·05 ₃₁	36·79 ₃₀₇
Mar. 1·0	57·310 ₂₉	75·31 ₂₄₇	1·291 ₂₂	45·12 ₃₅	9·74 ₁₃	33·72 ₃₁₇
11·0	57·339 ₇₄	72·84 ₂₆₄	1·313 ₅₈	44·77 ₁₃	9·61 ₅	30·55 ₃₁₆
21·0	57·413 ₁₂₀	70·20 ₂₇₆	1·371 ₉₅	44·64 ₁₃	9·66 ₂₄	27·39 ₃₀₂
31·0	57·533 ₁₆₈	67·44 ₂₈₃	1·466 ₁₃₃	44·77 ₄₀	9·90 ₄₁	24·37 ₂₇₅
Apr. 9·9	57·701 ₂₁₄	64·61 ₂₈₄	1·599 ₁₇₂	45·17 ₆₉	10·31 ₅₈	21·62 ₂₄₀
19·9	57·915 ₂₅₈	61·77 ₂₇₉	1·771 ₂₀₈	45·86 ₉₈	10·89 ₇₃	19·22 ₁₉₅
29·9	58·173 ₂₉₉	58·98 ₂₆₇	1·979 ₂₄₁	46·84 ₁₂₄	11·62 ₈₄	17·27 ₁₄₄
May 9·9	58·472 ₃₃₃	56·31 ₂₅₀	2·220 ₂₆₈	48·08 ₁₄₉	12·46 ₉₃	15·83 ₈₉
19·8	58·805 ₃₆₁	53·81 ₂₂₆	2·488 ₂₈₈	49·57 ₁₆₈	13·39 ₉₉	14·94 ₃₁
29·8	59·166 ₃₈₁	51·55 ₁₉₉	2·776 ₃₀₃	51·25 ₁₈₅	14·38 ₁₀₁	14·63 ₂₈
June 8·8	59·547 ₃₈₉	49·56 ₁₆₄	3·079 ₃₀₈	53·10 ₁₉₆	15·39 ₁₀₂	14·91 ₈₅
18·7	59·936 ₃₈₉	47·92 ₁₂₆	3·387 ₃₀₆	55·06 ₂₀₁	16·41 ₉₉	15·76 ₁₃₉
28·7	60·325 ₃₇₇	46·66 ₈₄	3·693 ₂₉₅	57·07 ₂₀₂	17·40 ₉₃	17·15 ₁₉₀
July 8·7	60·702 ₃₅₇	45·82 ₄₂	3·988 ₂₇₆	59·09 ₁₉₇	18·33 ₈₆	19·05 ₂₃₇
18·7	61·059 ₃₂₆	45·40 ₄	4·264 ₂₅₂	61·06 ₁₈₆	19·19 ₇₅	21·42 ₂₇₇
28·6	61·385 ₂₈₇	45·44 ₄₇	4·516 ₂₂₁	62·92 ₁₇₃	19·94 ₆₄	24·19 ₃₁₀
Aug. 7·6	61·672 ₂₃₉	45·91 ₈₈	4·737 ₁₈₅	64·65 ₁₅₅	20·58 ₅₁	27·29 ₃₃₈
17·6	61·911 ₁₉₀	46·79 ₁₂₆	4·922 ₁₄₇	66·20 ₁₃₄	21·09 ₃₇	30·67 ₃₅₇
27·6	62·101 ₁₃₄	48·05 ₁₅₈	5·069 ₁₀₈	67·54 ₁₁₂	21·46 ₂₃	34·24 ₃₇₀
Sept. 6·5	62·235 ₇₇	49·63 ₁₈₄	5·177 ₆₈	68·66 ₈₈	21·69 ₈	37·94 ₃₇₅
16·5	62·312 ₂₃	51·47 ₂₀₃	5·245 ₃₀	69·54 ₆₅	21·77 ₇	41·69 ₃₇₁
26·5	62·335 ₃₀	53·50 ₂₁₃	5·275 ₅	70·19 ₄₃	21·70 ₂₁	45·40 ₃₆₀
Oct. 6·4	62·305 ₇₆	55·63 ₂₁₃	5·270 ₃₅	70·62 ₂₀	21·49 ₃₄	49·00 ₃₄₁
16·4	62·229 ₁₁₆	57·76 ₂₀₅	5·235 ₆₁	70·82 ₁	21·15 ₄₈	52·41 ₃₁₄
26·4	62·113 ₁₄₈	59·81 ₁₈₉	5·174 ₈₂	70·83 ₁₈	20·67 ₆₀	55·55 ₂₈₀
Nov. 5·4	61·965 ₁₇₃	61·70 ₁₆₄	5·092 ₉₈	70·65 ₃₄	20·07 ₇₁	58·35 ₂₃₇
15·3	61·792 ₁₈₇	63·34 ₁₃₃	4·994 ₁₀₈	70·31 ₄₈	19·36 ₇₉	60·72 ₁₈₈
25·3	61·605 ₁₉₅	64·67 ₉₇	4·886 ₁₁₆	69·83 ₆₁	18·57 ₈₆	62·60 ₁₃₄
Dec. 5·3	61·410 ₁₉₅	65·64 ₅₇	4·770 ₁₁₇	69·22 ₇₁	17·71 ₉₁	63·94 ₇₄
15·3	61·215 ₁₈₇	66·21 ₁₄	4·653 ₁₁₆	68·51 ₇₉	16·80 ₉₃	64·68 ₁₁
25·2	61·028 ₁₇₃	66·35 ₂₇	4·537 ₁₁₁	67·72 ₈₄	15·87 ₉₂	64·79 ₅₁
35·2	60·855	66·08	4·426	66·88	14·95	64·28
Mean Place	59·413	67·95	2·417	51·26	12·96	29·48
Sec δ, Tan δ	1·368	−0·934	1·004	+0·091	4·517	+4·404
L α, L δ	0·00	+0·4	0·00	+0·4	−0·01	+0·4
ω α, ω δ	+0·06	−0·1	−0·01	−0·1	−0·29	−0·1
AUTHORITY			A. E.		A. E.	

430 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	λ Piscium. Mag. 4·6		δ Sculptoris. Mag. 4·6		φ Pegasi. Mag. 5·2	
	R. A.	Dec. N.	R. A.	Dec. S.	R. A.	Dec. N.
	^h 23 ^m 38	[°] 1 ['] 21	^h 23 ^m 44	[°] 28 ['] 32	^h 23 ^m 48	[°] 18 ['] 41
Jan. 1·2	9·326 ¹⁰⁷	39·05 ⁷⁸	57·023 ¹³²	76·75 ³	36·597 ¹²⁶	55·98 ¹⁰³
11·2	9·219 ⁹⁷	38·27 ⁷⁶	56·891 ¹¹⁷	76·78 ²⁸	36·471 ¹¹⁶	54·95 ¹¹⁸
21·2	9·122 ⁸¹	37·51 ⁷⁰	56·774 ⁹⁹	76·50 ⁶⁰	36·355 ¹⁰⁴	53·77 ¹²⁸
31·1	9·041 ⁶³	36·81 ⁶¹	56·675 ⁷⁷	75·90 ⁸⁹	36·251 ⁸⁴	52·49 ¹³³
Feb. 10·1	8·978 ³⁹	36·20 ⁴⁷	56·598 ⁵¹	75·01 ¹¹⁸	36·167 ⁵⁹	51·16 ¹³²
20·1	8·939 ¹²	35·73 ³²	56·547 ²¹	73·83 ¹⁴⁴	36·108 ³¹	49·84 ¹²⁶
Mar. 1·1	8·927 ¹⁹	35·41 ¹²	56·526 ¹⁴	72·39 ¹⁶⁸	36·077 ⁴	48·58 ¹¹²
11·0	8·946 ⁵⁴	35·29 ¹²	56·540 ⁵²	70·71 ¹⁹¹	36·081 ⁴²	47·46 ⁹²
21·0	9·000 ⁹²	35·41 ³⁷	56·592 ⁹²	68·80 ²¹⁰	36·123 ⁸²	46·54 ⁶⁶
31·0	9·092 ¹³⁰	35·78 ⁶³	56·684 ¹³³	66·70 ²²⁵	36·205 ¹²⁶	45·88 ³⁸
Apr. 9·9	9·222 ¹⁶⁸	36·41 ⁹¹	56·817 ¹⁷⁴	64·45 ²³⁶	36·331 ¹⁶⁷	45·50 ⁴
19·9	9·390 ²⁰⁵	37·32 ¹¹⁶	56·991 ²¹⁴	62·09 ²⁴³	36·498 ²⁰⁶	45·46 ³⁰
29·9	9·595 ²³⁷	38·48 ¹⁴¹	57·205 ²⁵¹	59·66 ²⁴⁴	36·704 ²⁴¹	45·76 ⁶⁵
May 9·9	9·832 ²⁶⁵	39·89 ¹⁶⁰	57·456 ²⁸³	57·22 ²³⁹	36·945 ²⁷²	46·41 ⁹⁹
19·8	10·097 ²⁸⁷	41·49 ¹⁷⁹	57·739 ³⁰⁹	54·83 ²²⁹	37·217 ²⁹⁵	47·40 ¹³¹
29·8	10·384 ³⁰⁰	43·28 ¹⁹¹	58·048 ³²⁶	52·54 ²¹⁴	37·512 ³¹⁰	48·71 ¹⁵⁹
June 8·8	10·684 ³⁰⁷	45·19 ¹⁹⁷	58·374 ³³⁸	50·40 ¹⁹²	37·822 ³¹⁷	50·30 ¹⁸⁴
18·8	10·991 ³⁰⁵	47·16 ²⁰⁰	58·712 ³³⁸	48·48 ¹⁶⁶	38·139 ³¹⁶	52·14 ²⁰¹
28·7	11·296 ²⁹⁵	49·16 ¹⁹⁶	59·050 ³³¹	46·82 ¹³⁶	38·455 ³⁰⁵	54·15 ²¹⁵
July 8·7	11·591 ²⁷⁷	51·12 ¹⁸⁸	59·381 ³¹⁴	45·46 ¹⁰⁰	38·760 ²⁸⁸	56·30 ²²⁴
18·7	11·868 ²⁵³	53·00 ¹⁷⁴	59·695 ²⁹⁰	44·46 ⁶⁵	39·048 ²⁶³	58·54 ²²⁵
28·6	12·121 ²²¹	54·74 ¹⁵⁷	59·985 ²⁵⁸	43·81 ²⁷	39·311 ²³³	60·79 ²²³
Aug. 7·6	12·342 ¹⁸⁷	56·31 ¹³⁷	60·243 ²²⁰	43·54 ¹⁰	39·544 ¹⁹⁷	63·02 ²¹⁴
17·6	12·529 ¹⁴⁹	57·68 ¹¹⁵	60·463 ¹⁷⁷	43·64 ⁴⁶	39·741 ¹⁵⁹	65·16 ²⁰²
27·6	12·678 ¹⁰⁸	58·83 ⁹¹	60·640 ¹³²	44·10 ⁸⁰	39·900 ¹¹⁹	67·18 ¹⁸⁷
Sept. 6·5	12·786 ⁷⁰	59·74 ⁶⁶	60·772 ⁸⁶	44·90 ¹⁰⁸	40·019 ⁷⁹	69·05 ¹⁶⁸
16·5	12·856 ³²	60·40 ⁴²	60·858 ⁴¹	45·98 ¹³²	40·098 ⁴¹	70·73 ¹⁴⁶
26·5	12·888 ²	60·82 ²¹	60·899 ¹	47·30 ¹⁴⁹	40·139 ⁵	72·19 ¹²⁴
Oct. 6·5	12·886 ³⁴	61·03 ¹	60·898 ³⁹	48·79 ¹⁵⁹	40·144 ²⁷	73·43 ¹⁰⁰
16·4	12·852 ⁶⁰	61·02 ¹⁹	60·859 ⁷³	50·38 ¹⁶²	40·117 ⁵⁵	74·43 ⁷⁵
26·4	12·792 ⁸¹	60·83 ³⁴	60·786 ⁹⁹	52·00 ¹⁵⁸	40·062 ⁷⁹	75·18 ⁵⁰
Nov. 5·4	12·711 ⁹⁸	60·49 ⁴⁸	60·687 ¹²⁰	53·58 ¹⁴⁶	39·983 ⁹⁷	75·68 ²⁵
15·3	12·613 ¹⁰⁷	60·01 ⁵⁸	60·567 ¹³⁵	55·04 ¹³⁰	39·886 ¹¹²	75·93 ⁰
25·3	12·506 ¹¹⁵	59·43 ⁶⁷	60·432 ¹⁴²	56·34 ¹⁰⁷	39·774 ¹²²	75·93 ²⁴
Dec. 5·3	12·391 ¹¹⁷	58·76 ⁷³	60·290 ¹⁴⁵	57·41 ⁸¹	39·652 ¹²⁸	75·69 ⁴⁹
15·3	12·274 ¹¹⁶	58·03 ⁷⁷	60·145 ¹⁴³	58·22 ⁵²	39·524 ¹³⁰	75·20 ⁷⁰
25·2	12·158 ¹¹⁰	57·26 ⁷⁸	60·002 ¹³⁵	58·74 ²¹	39·394 ¹²⁸	74·50 ⁹⁰
35·2	12·048	56·48	59·867	58·95	39·266	73·60
Mean Place	10·083	41·92	58·129	63·80	37·121	53·26
Sec δ, Tan δ	1·000	+0·024	1·138	-0·544	1·056	+0·338
L α, L δ	0·00	+0·4	0·00	+0·4	0·00	+0·4
ω α, ω δ	0·00	-0·1	+0·04	-0·1	-0·02	-0·1
AUTHORITY			A. E.		A. E.	

APPARENT PLACES OF STARS, 1924. 431

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	27 Piscium. Mag. 5.1		ω Piscium. Mag. 4.0		2 Ceti. Mag. 4.6	
	R. A.	Dec. S.	R. A.	Dec. N.	R. A.	Dec. S.
	^h 23 54	[°] 3 58	^h 23 55	[°] 6 26	^h 23 59	[°] 17 45
Jan. 1.2	46.205 ¹¹²	44.94 ⁶⁷	23.848 ¹¹⁴	31.69 ⁸⁵	50.004 ¹²¹	42.84 ³⁸
11.2	46.093 ¹⁰³	45.61 ⁵⁸	23.734 ¹⁰⁷	30.84 ⁸⁷	49.883 ¹¹²	43.22 ¹⁶
21.2	45.990 ⁹⁰	46.19 ⁴⁶	23.627 ⁹⁵	29.97 ⁸⁶	49.771 ⁹⁸	43.38 ⁸
31.1	45.900 ⁷⁴	46.65 ³⁴	23.532 ⁷⁸	29.11 ⁸¹	49.673 ⁸²	43.30 ³²
Feb. 10.1	45.826 ⁵³	46.99 ¹⁷	23.454 ⁵⁶	28.30 ⁷¹	49.591 ⁵⁹	42.98 ⁵⁷
20.1	45.773 ²⁷	47.16 ²	23.398 ²⁹	27.59 ⁵⁸	49.532 ³²	42.41 ⁸¹
Mar. 1.1	45.746 ⁴	47.14 ²²	23.369 ²	27.01 ⁴⁰	49.500 ²	41.60 ¹⁰⁶
11.0	45.750 ³⁸	46.92 ⁴⁵	23.371 ³⁷	26.61 ¹⁹	49.498 ³³	40.54 ¹²⁹
21.0	45.788 ⁷⁵	46.47 ⁷⁰	23.408 ⁷⁵	26.42 ⁶	49.531 ⁷¹	39.25 ¹⁵²
31.0	45.863 ¹¹⁴	45.77 ⁹⁴	23.483 ¹¹⁵	26.48 ³³	49.602 ¹¹¹	37.73 ¹⁷²
Apr. 9.9	45.977 ¹⁵³	44.83 ¹¹⁸	23.598 ¹⁵⁴	26.81 ⁶²	49.713 ¹⁵¹	36.01 ¹⁹⁰
19.9	46.130 ¹⁹¹	43.65 ¹⁴¹	23.752 ¹⁹³	27.43 ⁹⁰	49.864 ¹⁹⁰	34.11 ²⁰⁴
29.9	46.321 ²²⁶	42.24 ¹⁶²	23.945 ²²⁸	28.33 ¹¹⁷	50.054 ²²⁷	32.07 ²¹⁵
May 9.9	46.547 ²⁵⁵	40.62 ¹⁷⁸	24.173 ²⁵⁸	29.50 ¹⁴²	50.281 ²⁵⁹	29.92 ²²¹
19.8	46.802 ²⁸⁰	38.84 ¹⁹⁰	24.431 ²⁸²	30.92 ¹⁶⁴	50.540 ²⁸⁵	27.71 ²²⁰
29.8	47.082 ²⁹⁷	36.94 ¹⁹⁸	24.713 ²⁹⁸	32.56 ¹⁸¹	50.825 ³⁰⁵	25.51 ²¹⁶
June 8.8	47.379 ³⁰⁶	34.96 ²⁰¹	25.011 ³⁰⁷	34.37 ¹⁹³	51.130 ³¹⁵	23.35 ²⁰⁵
18.8	47.685 ³⁰⁸	32.95 ¹⁹⁸	25.318 ³⁰⁸	36.30 ²⁰¹	51.445 ³¹⁸	21.30 ¹⁸⁹
28.7	47.993 ³⁰⁰	30.97 ¹⁸⁹	25.626 ³⁰¹	38.31 ²⁰³	51.763 ³¹⁴	19.41 ¹⁶⁸
July 8.7	48.293 ²⁸⁵	29.08 ¹⁷⁶	25.927 ²⁸⁴	40.34 ²⁰⁰	52.077 ³⁰⁰	17.73 ¹⁴³
18.7	48.578 ²⁶⁴	27.32 ¹⁵⁹	26.211 ²⁶³	42.34 ¹⁹¹	52.377 ²⁷⁷	16.30 ¹¹³
28.6	48.842 ²³⁵	25.73 ¹³⁸	26.474 ²³³	44.25 ¹⁷⁹	52.654 ²⁵⁰	15.17 ⁸²
Aug. 7.6	49.077 ²⁰²	24.35 ¹¹⁴	26.707 ²⁰¹	46.04 ¹⁶¹	52.904 ²¹⁷	14.35 ⁴⁹
17.6	49.279 ¹⁶⁵	23.21 ⁸⁸	26.908 ¹⁶⁴	47.65 ¹⁴³	53.121 ¹⁷⁸	13.86 ¹⁶
27.6	49.444 ¹²⁶	22.33 ⁶¹	27.072 ¹²⁶	49.08 ¹²⁰	53.299 ¹³⁸	13.70 ¹⁵
Sept. 6.5	49.570 ⁸⁷	21.72 ³⁶	27.198 ⁸⁷	50.28 ⁹⁸	53.437 ⁹⁶	13.85 ⁴⁵
16.5	49.657 ⁵⁰	21.36 ¹²	27.285 ⁴⁹	51.26 ⁷⁴	53.533 ⁵⁶	14.30 ⁷¹
26.5	49.707 ¹⁴	21.24 ¹²	27.334 ¹⁵	52.00 ⁵¹	53.589 ¹⁸	15.01 ⁹²
Oct. 6.5	49.721 ¹⁹	21.36 ³¹	27.349 ¹⁷	52.51 ³⁰	53.607 ¹⁷	15.93 ¹⁰⁸
16.4	49.702 ⁴⁵	21.67 ⁴⁷	27.332 ⁴⁴	52.81 ⁸	53.590 ⁴⁸	17.01 ¹¹⁸
26.4	49.657 ⁶⁹	22.14 ⁶⁰	27.288 ⁶⁷	52.89 ¹⁰	53.542 ⁷³	18.19 ¹²²
Nov. 5.4	49.588 ⁸⁷	22.74 ⁷⁰	27.221 ⁸⁶	52.79 ²⁶	53.469 ⁹⁴	19.41 ¹²¹
15.3	49.501 ¹⁰¹	23.44 ⁷⁵	27.135 ¹⁰⁰	52.53 ⁴²	53.375 ¹⁰⁸	20.62 ¹¹⁵
25.3	49.400 ¹⁰⁹	24.19 ⁷⁷	27.035 ¹⁰⁹	52.11 ⁵⁵	53.267 ¹¹⁹	21.77 ¹⁰³
Dec. 5.3	49.291 ¹¹⁵	24.96 ⁷⁸	26.926 ¹¹⁵	51.56 ⁶⁵	53.148 ¹²⁴	22.80 ⁸⁹
15.3	49.176 ¹¹⁶	25.74 ⁷⁵	26.811 ¹¹⁸	50.91 ⁷⁴	53.024 ¹²⁷	23.69 ⁷¹
25.2	49.060 ¹¹³	26.49 ⁷⁰	26.693 ¹¹⁵	50.17 ⁸¹	52.897 ¹²¹	24.40 ⁵⁰
35.2	48.947	27.19	26.578	49.36	52.776	24.90
Mean Place	46.922	39.57	24.456	33.45	50.851	32.59
Sec δ, Tan δ	1.002	-0.070	1.006	+0.113	1.050	-0.320
L α, L δ	0.00	+0.4	0.00	+0.4	0.00	+0.4
ω α, ω δ	0.00	0.0	-0.01	0.0	+0.02	0.0
AUTHORITY	A. N.		A. E.		A. N.	

432 MOON-CULMINATING STARS, 1924.

AT TRANSIT AT GREENWICH.

Date.	Name.	Mag.	Apparent Right Ascension.	Var. of C's R.A. in 1 hour of Long.	Sid. Time of Semid. pass# Merid.	Apparent Declination.	Var. of C's Dec. in 1 hour of Long.	Semi- diameter.	Hor. Par.
			h m s	s	s	° ' "	— " "	' "	' "
Jan. 0	Moon II. L.	-	13 23 26.66	139.08	67.19	S. 4 38 0.3	-692.9	16 7.25	59 9.93
	Moon II. U.	24.2	13 51 31.17	141.75	67.84	6 54 56.6	-674.6	16 11.97	59 27.27
1	Moon II. L.	-	14 20 10.07	144.79	68.57	S. 9 7 3.1	-644.5	16 16.32	59 43.23
	Moon II. U.	25.3	14 49 27.21	148.10	69.36	11 11 53.5	-601.8	16 20.17	59 57.36
2	Moon II. L.	-	15 19 24.79	151.50	70.15	S. 13 6 55.0	-546.3	16 23.39	60 9.17
	Moon II. U.	26.3	15 50 2.89	154.81	70.91	14 49 33.1	-478.0	16 25.84	60 18.16
3	Moon II. L.	-	16 21 18.86	157.78	71.59	S. 16 17 18.3	-397.6	16 27.39	60 23.85
	Moon II. U.	27.4	16 53 7.16	160.15	72.12	17 27 54.3	-306.8	16 27.94	60 25.88
4	Moon II. L.	-	17 25 19.27	161.70	72.46	S. 18 19 28.2	-207.8	16 27.42	60 23.95
	Moon II. U.	28.4	17 57 44.09	162.25	72.57	18 50 40.4	-103.7	16 25.78	60 17.95
5	Moon II. L.	-	18 30 8.92	161.69	72.44	S. 19 0 50.5	+ 1.9	16 23.04	60 7.88
6	Moon II. U.	29.4	19 2 20.33	160.03	72.04	S. 18 50 2.5	+105.4	16 19.23	59 53.92
	Moon I. L.	-	19 31 42.85	157.50	71.43	18 19 3 1	+203.3	16 14.46	59 36.42
7	Moon I. U.	1.0	20 2 52.92	154.06	70.62	S. 17 29 16.5	+292.8	16 8.85	59 15.80
	Moon I. L.	-	20 33 18.05	150.05	69.67	16 22 35.8	+372.1	16 2.54	58 52.66
8	Moon I. U.	2.1	21 2 52.83	145.71	68.64	S. 15 1 12.1	+439.9	15 55.72	58 27.61
	Moon I. L.	-	21 31 34.75	141.28	67.57	13 27 25.9	+495.9	15 48.55	58 1.31
9	Moon I. U.	3.1	21 59 23.91	136.95	66.53	S. 11 43 36.9	+540.4	15 41.22	57 34.42
	Moon I. L.	-	22 26 22.59	132.89	65.53	9 51 59.0	+574.2	15 33.90	57 7.56
10	Moon I. U.	4.1	22 52 34.70	129.20	64.62	S. 7 54 36.1	+598.1	15 26.75	56 41.29
	Moon I. L.	-	23 18 5.30	125.98	63.81	5 53 19.8	+613.2	15 19.89	56 16.14
11	Moon I. U.	5.2	23 43 0.20	123.26	63.12	S. 3 49 49.4	+620.6	15 13.46	55 52.54
	Moon I. L.	-	0 7 25.63	121.07	62.57	1 45 32.5	+621.1	15 7.56	55 30.87
	4 Ceti	6.3	0 3 50			2 58			
	54 B. Ceti	6.3	0 20 36			S. 2 38			
12	Moon I. U.	6.2	0 31 27.99	119.42	62.15	N. 0 18 13.6	+615.6	15 2.26	55 11.42
	Moon I. L.	-	0 55 13.71	118.29	61.87	2 20 19.6	+604.6	14 57.63	54 54.41
	26 Ceti	6.0	0 59 54			0 57			
	33 Ceti	6.1	1 6 38			2 2			
13	Moon I. U.	7.2	1 18 49.07	117.68	61.70	N. 4 19 42.8	+588.5	14 53.70	54 40.02
	Moon I. L.	-	1 42 20.11	117.57	61.68	6 15 25.2	+567.8	14 50.53	54 28.36
	μ Piscium	5.0	1 26 11			5 45			
	ν Piscium	4.7	1 37 28			5 6			
14	Moon I. U.	8.2	2 5 52.58	117.92	61.77	N. 8 6 30.8	+542.4	14 48.11	54 19.48
	Moon I. L.	-	2 29 31.87	118.70	61.96	9 52 5.3	+512.6	14 46.45	54 13.38
	25 Arietis	6.5	2 23 21			9 52			
	85 Ceti	6.3	2 38 23			10 25			
15	Moon I. U.	9.3	2 53 22.82	119.86	62.26	N. 11 31 13.8	+478.1	14 45.53	54 10.04
	Moon I. L.	-	3 17 29.78	121.35	62.63	13 3 0.7	+438.9	14 45.35	54 9.37
	147 B. Arietis	5.8	3 2 14			12 54			
	8 B. Tauri	6.2	3 19 59			N. 12 22			

MOON-CULMINATING STARS, 1924. 433

AT TRANSIT AT GREENWICH.

Date.	Name.	Mag.	Apparent Right Ascension.	Var. of C's R.A. in 1 hour of Long.	Sid. Time of Semid. pass Merid.	Apparent Declination.	Var. of C's Dec. in 1 hour of Long.	Semi- diameter.	Hor. Par.
			<i>h m s</i>	<i>s</i>	<i>s</i>	<i>° ' "</i>	<i>"</i>	<i>' "</i>	<i>' "</i>
Jan. 16	Moon I. U.	10.3	3 41 56.36	123.12	63.07	N. 14 26 28.9	+394.9	14 45.87	54 11.27
	Moon I. L.	-	4 6 45.41	125.08	63.56	15 40 39.2	+346.0	14 47.05	54 15.59
	179 B. Tauri	5.9	4 3 24			14 57			
	γ Tauri	3.9	4 15 29			15 27			
17	Moon I. U.	11.3	4 31 58.83	127.17	64.07	N. 16 44 32.2	+292.0	14 48.84	54 22.16
	Moon I. L.	-	4 57 37.50	129.28	64.58	17 37 8.6	+233.2	14 51.19	54 30.79
	318 B. Tauri	5.7	4 53 0			17 2			
	m Tauri	5.0	5 2 58			18 33			
18	Moon I. U.	12.4	5 23 41.17	131.32	65.07	N. 18 17 30.4	+169.7	14 54.04	54 41.24
	Moon I. L.	-	5 50 8.44	133.19	65.51	18 44 44.7	+102.0	14 57.32	54 53.29
	130 Tauri	5.6	5 43 1			17 42			
	64 Orionis	5.1	5 58 58			19 41			
19	Moon I. U.	13.4	6 16 56.83	134.82	65.89	N. 18 58 4.8	+30.8	15 0.96	55 6.66
	Moon I. L.	-	6 44 2.88	136.13	66.20	18 56 53.6	-43.0	15 4.90	55 21.11
	74 B. Geminor.	6.2	6 42 58			18 16			
	110 B. Geminor.	6.2	6 58 1			17 52			
20	Moon I. U.	14.4	7 11 22.42	137.06	66.41	N. 18 40 46.9	-118.3	15 9.06	55 36.36
	Moon I. L.	-	7 38 50.84	137.61	66.53	18 9 34.2	-193.8	15 13.36	55 52.16
	162 B. Geminor.	5.7	7 27 27			17 15			
	209 B. Geminor.	6.2	7 47 33			19 31			
21	Moon I. U.	15.5	8 6 23.49	137.77	66.57	N. 17 23 21.3	-268.1	15 17.74	56 8.24
	θ Cancri	5.5	8 27 17			18 21			
	54 Cancri	6.3	8 46 49			15 38			
22	Moon II. L.	-	8 36 9.09	137.59	66.53	N. 16 22 31.1	-339.8	15 22.14	56 24.40
	Moon II. U.	16.5	9 3 37.67	137.14	66.43	15 7 42.4	-407.6	15 26.51	56 40.43
	12 B. Leonis	6.3	9 21 21			16 55			
	ψ Leonis	5.6	9 39 37			14 22			
23	Moon II. L.	-	9 30 59.71	136.51	66.28	N. 13 39 49.8	-470.2	15 30.80	56 56.16
	Moon II. U.	17.6	9 58 13.70	135.81	66.13	12 0 1.4	-526.7	15 34.97	57 11.46
	44 Leonis	5.9	10 21 16			9 10			
	49 Leonis	5.7	10 31 4			9 2			
24	Moon II. L.	-	10 25 19.29	135.14	65.98	N. 10 9 37.1	-576.1	15 38.99	57 26.21
	Moon II. U.	18.6	10 52 17.45	134.59	65.88	8 10 6.5	-617.7	15 42.84	57 40.35
	χ Leonis	4.7	11 1 7			7 45			
	σ Leonis	4.1	11 17 14			6 27			
25	Moon II. L.	-	11 19 10.25	134.26	65.82	N. 6 3 6.9	-650.9	15 46.52	57 53.85
	Moon II. U.	19.6	11 46 0.79	134.22	65.85	3 50 21.4	-675.2	15 50.01	58 6.67
	10 Virginis	6.2	12 5 48			2 19			
	190 B. Virginis	7.4	12 26 42			3 56			
26	Moon II. L.	-	12 12 52.99	134.54	65.96	N. 1 33 38.4	-690.4	15 53.32	58 18.81
	Moon II. U.	20.7	12 39 51.43	135.27	66.17	S. 0 45 10.0	-696.1	15 56.44	58 30.25
	48 Virginis	6.5	13 0 0			3 15			
	65 Virginis	6.0	13 19 23			S. 4 32			

AT TRANSIT AT GREENWICH.

Date.	Name.	Mag.	Apparent Right Ascension.	Var. of C's R.A. in 1 hour of Long.	Sid. Time of Semid. pass ^g Merid.	Apparent Declination.	Var. of C's Dec. in 1 hour of Long.	Semi- diameter.	Hor. Par.
			h m s	s	s	° ' "	"	' "	' "
Jan. 27	Moon II. L.	-	13 7 1·10	136·42	66·48	S. 3 4 7·6	-691·9	15 59·36	58 40·99
	Moon II. U.	21·7	13 34 27·12	137·99	66·89	5 21 14·6	-677·6	16 2·08	58 50·98
	598 B. Virginis	6·1	13 50 59			7 41			
	235 G. Virginis	6·5	14 13 58			7 11			
28	Moon II. L.	-	14 2 14·47	139·97	67·40	S. 7 34 27·7	-652·8	16 4·59	59 0·16
	Moon II. U.	22·7	14 30 27·67	142·29	67·98	9 41 39·8	-617·4	16 6·84	59 8·45
	17 Libræ	6·4	14 54 6			10 51			
	130 B. Libræ	5·9	15 19 42			12 6			
29	Moon II. L.	-	14 59 10·39	144·87	68·61	S. 11 40 41·8	-571·1	16 8·82	59 15·70
	Moon II. U.	23·8	15 28 25·02	147·58	69·26	13 29 23·4	-514·0	16 10·47	59 21·76
	202 B. Libræ	6·4	15 51 58			14 11			
	91 B. Scorpis	6·1	16 11 33			14 39			
30	Moon II. L.	-	15 58 12·31	150·28	69·90	S. 15 5 36·4	-446·4	16 11·74	59 26·42
	Moon II. U.	24·8	16 28 30·93	152·77	70·48	16 27 18·5	-369·0	16 12·57	59 29·47
31	Moon II. L.	-	16 59 17·31	154·87	70·95	S. 17 32 39·2	-283·1	16 12·90	59 30·67
	Moon II. U.	25·8	17 30 25·49	156·38	71·28	18 20 5·6	-190·3	16 12·66	59 29·80
Feb. 1	Moon II. L.	-	18 1 47·43	157·14	71·43	S. 18 48 29·2	- 93·1	16 11·81	59 26·67
	Moon II. U.	26·9	18 33 13·49	157·05	71·38	18 57 11·7	+ 6·0	16 10·29	59 21·10
2	Moon II. L.	-	19 4 33·13	156·07	71·13	S. 18 46 8·4	+104·1	16 8·09	59 13·03
	Moon II. U.	27·9	19 35 35·91	154·25	70·67	18 15 49·0	+198·2	16 5·20	59 2·42
3	Moon II. L.	-	20 6 12·33	151·70	70·04	S. 17 27 16·1	+285·9	16 1·64	58 49·36
	Moon II. U.	29·0	20 36 14·53	148·58	69·28	16 22 0·0	+365·2	15 57·45	58 33·99
4	Moon II. L.	-	21 5 36·77	145·08	68·42	S. 15 1 51·6	+434·4	15 52·71	58 16·57
5	Moon I. U.	0·5	21 32 0·61	141·54	67·51	S. 13 28 55·9	+493·0	15 47·49	57 57·42
	Moon I. L.	-	21 59 56·67	137·82	66·59	11 45 23·5	+540·6	15 41·90	57 36·92
6	Moon I. U.	1·5	22 27 8·79	134·23	65·71	S. 9 53 25·4	+577·3	15 36·07	57 15·50
	Moon I. L.	-	22 53 39·25	130·89	64·88	7 55 7·9	+603·9	15 30·10	56 53·60
7	Moon I. U.	2·5	23 19 31·55	127·89	64·13	S. 5 52 29·1	+621·0	15 24·13	56 31·67
	Moon I. L.	-	23 44 50·14	125·28	63·49	3 47 17·3	+629·6	15 18·27	56 10·18
8	Moon I. U.	3·6	0 9 40·00	123·11	62·95	S. 1 41 10·5	+630·4	15 12·65	55 49·55
	Moon I. L.	-	0 34 6·52	121·39	62·53	N. 0 24 23·6	+624·2	15 7·37	55 30·17
9	Moon I. U.	4·6	0 58 15·24	120·14	62·24	N. 2 28 6·2	+611·9	15 2·53	55 12·40
	Moon I. L.	-	1 22 11·70	119·35	62·06	4 28 47·0	+594·0	14 58·21	54 56·56
	f Piscium	5·3	1 13 52			3 13			
	μ Piscium	5·0	1 26 11			5 45			
10	Moon I. U.	5·6	1 46 1·37	119·00	61·99	N. 6 25 21·7	+571·0	14 54·49	54 42·90
	Moon I. L.	-	2 9 49·51	119·09	62·04	8 16 51·2	+543·2	14 51·43	54 31·60
	39 B. Arietis	6·5	2 0 50			7 22			
	ξ Arietis	5·5	2 20 44			N. 10 16			

MOON-CULMINATING STARS, 1924. 435

AT TRANSIT AT GREENWICH.

Date.	Name.	Mag.	Apparent Right Ascension.	Var. of C's R.A. in 1 hour of Long.	Sid. Time of Semid. pass* Merid.	Apparent Declination.	Var. of C's Dec. in 1 hour of Long.	Semi- diameter.	Hor. Par.
			h m s	s	s	° ' "	"	' "	' "
Feb. 11	Moon I. U.	6.7	2 33 41.12	119.58	62.20	N. 10 2 19.4	+510.8	14 49.07	54 23.00
	Moon I. L.	-	2 57 40.87	120.44	62.44	11 40 52.7	+474.0	14 47.45	54 17.06
	μ Ceti	4.4	2 40 50			9 48			
	147 B. Arietis	5.8	3 2 13			12 54			
12	Moon I. U.	7.7	3 21 52.97	121.63	62.76	N. 13 11 38.2	+432.8	14 46.59	54 13.92
	Moon I. L.	-	3 46 21.09	123.10	63.15	14 33 43.1	+387.3	14 46.51	54 13.60
	30 B. Tauri	6.4	3 33 32			15 11			
	λ Tauri	3.3	3 56 28			12 16			
13	Moon I. U.	8.7	4 11 8.32	124.80	63.59	N. 15 46 14.5	+337.2	14 47.19	54 16.11
	Moon I. L.	-	4 36 16.98	126.66	64.07	16 48 18.9	+282.8	14 48.63	54 21.40
	275 B. Tauri	6.5	4 29 17			16 10			
	302 B. Tauri	6.1	4 41 51			18 36			
14	Moon I. U.	9.7	5 1 48.55	128.61	64.55	N. 17 39 3.4	+223.9	14 50.80	54 29.38
	Moon I. L.	-	5 27 43.61	130.56	65.03	18 17 35.8	+160.8	14 53.67	54 39.90
	353 B. Tauri	6.5	5 16 28			19 44			
	120 Tauri	5.6	5 29 5			18 29			
15	Moon I. U.	10.8	5 54 1.77	132.45	65.48	N. 18 43 7.0	+ 93.8	14 57.18	54 52.78
	Moon I. L.	-	6 20 41.69	134.18	65.88	18 54 52.4	+ 23.3	15 1.27	55 7.80
	71 Orionis	5.1	6 10 23			19 11			
	ν Geminor.	4.1	6 24 28			20 16			
16	Moon I. U.	11.8	6 47 41.11	135.68	66.23	N. 18 52 14.4	- 50.0	15 5.87	55 24.67
	Moon I. L.	-	7 14 57.04	136.92	66.50	18 34 44.9	-125.1	15 10.89	55 43.10
	ζ Gemin.(var.)	3.7	6 59 37			20 41			
	56 Geminor.	5.2	7 17 29			20 35			
17	Moon I. U.	12.8	7 42 25.98	137.85	66.70	N. 18 2 8.3	-201.0	15 16.24	56 2.72
	Moon I. L.	-	8 10 4.14	138.46	66.82	17 14 22.5	-276.4	15 21.80	56 23.14
	10 H. Cancri	6.1	8 0 23			19 3			
	d ¹ Cancri	5.9	8 19 2			18 34			
18	Moon I. U.	13.9	8 37 47.75	138.77	66.87	N. 16 11 42.2	-349.9	15 27.48	56 43.97
	Moon I. L.	-	9 5 33.49	138.82	66.86	14 54 38.9	-420.0	15 33.15	57 4.78
	o ³ Cancri	5.7	8 53 22			15 52			
	π Cancri	5.6	9 11 3			15 15			
19	Moon I. U.	14.9	9 33 18.58	138.67	66.81	N. 13 24 1.2	-485.4	15 38.70	57 25.16
	ν Leonis	5.0	9 54 9			12 48			
	34 Leonis	6.4	10 7 34			13 44			
20	Moon I. L.	-	10 1 1.16	138.41	66.74	N. 11 40 54.8	-544.6	15 44.02	57 44.70
	Moon II. U.	16.0	10 30 53.58	138.10	66.67	9 46 41.6	-596.3	15 49.02	58 3.05
	ι Leonis	5.3	10 45 17			10 57			
	χ Leonis	4.7	11 1 7			7 45			
21	Moon II. L.	-	10 58 29.22	137.86	66.61	N. 7 42 57.3	-639.6	15 53.61	58 19.88
	Moon II. U.	17.0	11 26 2.69	137.75	66.60	5 31 29.8	-673.4	15 57.71	58 34.92
	451 B. Leonis	7.0	11 38 33			2 47			
	b Virginis	5.2	11 56 4			N. 4 5			

436 MOON-CULMINATING STARS, 1924.

AT TRANSIT AT GREENWICH.

Date.	Name.	Mag.	Apparent Right Ascension.	Var. of C's R.A. in 1 hour of Long.	Std. Time of Semid. pass ^s Merid.	Apparent Declination.	Var. of C's Dec. in 1 hour of Long.	Semi- diameter.	Hor. Par.
			h m s	s	s	° ' "	"	' "	' "
Feb. 22	Moon II. L.	-	11 53 36.06	137.85	66.65	N. 3 14 17.2	-697.0	16 1.26	58 47.97
	Moon II. U.	18.0	12 21 12.12	138.21	66.76	N. 0 53 25.3	-709.8	16 4.25	58 58.92
	γ Virg. (mean)	2.9	12 37 50			S. 1 2			
	k Virginis	5.7	12 55 46			3 24			
23	Moon II. L.	-	12 48 54.20	138.86	66.95	S. 1 28 54.3	-711.5	16 6.64	59 7.70
	Moon II. U.	19.1	13 16 45.98	139.82	67.22	3 50 26.5	-701.9	16 8.45	59 14.33
	566 B. Virginis	6.4	13 39 58			5 7			
	598 B. Virginis	6.1	13 51 0			7 41			
24	Moon II. L.	-	13 44 51.17	141.09	67.57	S. 6 8 54.6	-680.9	16 9.69	59 18.89
	Moon II. U.	20.1	14 13 13.27	142.63	67.98	8 22 2.0	-648.5	16 10.40	59 21.49
	8 B. Libræ	6.9	14 34 56			10 14			
	13 Libræ	5.7	14 50 16			11 35			
25	Moon II. L.	-	14 41 55.23	144.39	68.44	S. 10 27 34.1	-605.0	16 10.61	59 22.27
	Moon II. U.	21.1	15 10 59.15	146.28	68.93	12 23 20.5	-551.0	16 10.37	59 21.39
	γ Libræ	4.0	15 31 17			14 32			
	195 B. Libræ	6.2	15 47 24			13 54			
26	Moon II. L.	-	15 40 25.96	148.18	69.41	S. 14 7 17.5	-486.9	16 9.72	59 19.02
	Moon II. U.	22.2	16 10 15.11	149.98	69.86	15 37 30.7	-413.8	16 8.71	59 15.31
	24 Scorpïi	5.0	16 37 10			17 36			
	78 B. Ophiuchi	6.5	16 51 38			16 41			
27	Moon II. L.	-	16 40 24.46	151.52	70.23	S. 16 52 18.5	-332.9	16 7.37	59 10.38
	Moon II. U.	23.2	17 10 50.11	152.67	70.50	17 50 16.3	-245.8	16 5.72	59 4.32
	192 B. Ophiuchi	6.3	17 20 10			18 22			
	305 B. Ophiuchi	6.3	17 51 26			18 47			
28	Moon II. L.	-	17 41 26.59	153.31	70.64	S. 18 30 19.2	-154.1	16 3.78	58 57.22
	Moon II. U.	24.3	18 12 7.13	153.34	70.63	18 51 46.2	-60.1	16 1.58	58 49.12
29	Moon II. L.	-	18 42 44.04	152.70	70.45	S. 18 54 22.1	+34.0	15 59.10	58 40.02
	Moon II. U.	25.3	19 13 9.44	151.42	70.12	18 38 18.6	+126.0	15 56.35	58 29.94
Mar. 1	Moon II. L.	-	19 43 15.77	149.54	69.63	S. 18 4 14.0	+213.9	15 53.33	58 18.87
	Moon II. U.	26.3	20 12 56.38	147.15	69.02	17 13 9.9	+295.6	15 50.04	58 6.80
2	Moon II. L.	-	20 42 5.98	144.39	68.32	S. 16 6 28.6	+369.9	15 46.49	57 53.74
	Moon II. U.	27.4	21 10 40.85	141.39	67.55	14 45 47.8	+435.4	15 42.68	57 39.75
3	Moon II. L.	-	21 38 38.98	138.29	66.75	S. 13 12 55.8	+491.6	15 38.62	57 24.88
	Moon II. U.	28.4	22 5 59.92	135.21	65.96	11 29 47.1	+538.2	15 34.36	57 9.23
4	Moon II. L.	-	22 32 44.64	132.27	65.20	S. 9 38 18.4	+575.0	15 29.92	56 52.93
5	Moon II. U.	29.4	22 58 55.27	129.55	64.49	S. 7 40 24.6	+602.4	15 25.36	56 36.19
	Moon I. L.	-	23 22 27.14	127.20	63.86	5 37 56.8	+620.8	15 20.72	56 19.18
6	Moon I. U.	0.9	23 47 40.46	125.08	63.32	S. 3 32 40.3	+630.6	15 16.09	56 2.17
	Moon I. L.	-	0 12 30.41	123.31	62.87	S. 1 26 13.6	+632.6	15 11.52	55 45.41
7	Moon I. U.	1.9	0 37 1.41	121.92	62.53	N. 0 39 51.9	+627.2	15 7.10	55 29.19
	Moon I. L.	-	1 1 18.00	120.91	62.29	N. 2 44 12.0	+615.1	15 2.90	55 13.78

MOON-CULMINATING STARS, 1924. 437

AT TRANSIT AT GREENWICH.

Date.	Name.	Mag.	Apparent Right Ascension.	Var. of C's R.A. in 1 hour of Long.	Sid. Time of Semid. pass# Merid.	Apparent Declination.	Var. of C's Dec. in 1 hour of Long.	Semi- diameter.	Hor. Par.
			h m s	s	s	° ' "	"	' "	' "
Mar. 8	Moon I. U.	2.9	1 25 24.73	120.28	62.15	N. 4 45 29.4	+596.8	14 59.00	54 59.47
	Moon I. L.	-	1 49 26.09	120.01	62.12	6 42 33.0	+572.9	14 55.48	54 46.55
9	Moon I. U.	4.0	2 13 26.36	120.10	62.17	N. 8 34 17.0	+543.6	14 52.41	54 35.28
	Moon I. L.	-	2 37 29.62	120.50	62.32	10 19 40.2	+509.5	14 49.86	54 25.91
10	Moon I. U.	5.0	3 1 39.64	121.21	62.55	N. 11 57 45.1	+470.6	14 47.88	54 18.65
	Moon I. L.	-	3 25 59.78	122.19	62.84	13 27 36.9	+427.3	14 46.54	54 13.72
	8 B. Tauri	6.2	3 19 59			12 22			
	30 B. Tauri	6.4	3 33 31			15 11			
11	Moon I. U.	6.0	3 50 33.00	123.39	63.18	N. 14 48 23.5	+379.8	14 45.87	54 11.27
	Moon I. L.	-	4 15 21.74	124.76	63.57	15 59 14.5	+328.1	14 45.92	54 11.45
	193 B. Tauri	6.2	4 8 9			17 5			
	71 Tauri	4.6	4 22 1			15 27			
12	Moon I. U.	7.1	4 40 27.84	126.27	63.98	N. 16 59 21.3	+272.4	14 46.71	54 14.34
	Moon I. L.	-	5 5 52.57	127.86	64.41	17 47 56.8	+212.9	14 48.26	54 20.03
	m Tauri	5.0	5 2 57			18 33			
	353 B. Tauri	6.5	5 16 27			19 44			
13	Moon I. U.	8.1	5 31 36.48	129.46	64.83	N. 18 24 16.7	+149.8	14 50.57	54 28.52
	Moon I. L.	-	5 57 39.48	131.03	65.22	18 47 39.4	+ 83.4	14 53.64	54 39.79
	57 Orionis	5.8	5 50 27			19 44			
	68 Orionis	5.7	6 7 32			19 48			
14	Moon I. U.	9.1	6 24 0.79	132.51	65.59	N. 18 57 27.8	+ 14.2	14 57.44	54 53.75
	Moon I. L.	-	6 50 39.07	133.85	65.92	18 53 10.6	- 57.4	15 1.95	55 10.27
	74 B. Geminor.	6.2	6 42 58			18 16			
	110 B. Geminor.	6.2	6 58 1			17 52			
15	Moon I. U.	10.2	7 17 32.48	135.02	66.19	N. 18 34 23.3	-130.7	15 7.10	55 29.17
	Moon I. L.	-	7 44 38.89	136.01	66.41	18 0 50.7	-204.8	15 12.83	55 50.20
	f Geminor.	5.3	7 35 6			17 51			
	85 Geminor.	5.2	7 51 15			20 5			
16	Moon I. U.	11.2	8 11 56.00	136.81	66.58	N. 17 12 28.4	-278.8	15 19.05	56 13.03
	Moon I. L.	-	8 39 21.59	137.43	66.70	16 9 24.4	-351.6	15 25.66	56 37.29
	90 B. Caneri	6.3	8 31 53			15 34			
	54 Caneri	6.3	8 46 49			15 38			
17	Moon I. U.	12.2	9 6 53.73	137.91	66.79	N. 14 52 0.8	-421.9	15 32.53	57 2.52
	Moon I. L.	-	9 34 30.92	138.28	66.85	13 20 55.1	-488.4	15 39.54	57 28.24
	12 B. Leonis	6.3	9 21 21			16 55			
	ψ Leonis	5.6	9 39 37			14 22			
18	Moon I. U.	13.3	10 2 12.29	138.61	66.90	N. 11 37 0.9	-549.7	15 46.52	57 53.87
	Moon I. L.	-	10 29 57.68	138.96	66.97	9 41 28.5	-604.5	15 53.33	58 18.85
	44 Leonis	5.9	10 21 16			9 10			
	49 Leonis	5.7	10 31 4			N. 9 2			

438 MOON-CULMINATING STARS, 1924.

AT TRANSIT AT GREENWICH.

Date.	Name.	Mag.	Apparent Right Ascension.	Var. of C's R.A. in 1 hour of Long.	Sid. Time of Semid. pass# Merid.	Apparent Declination.	Var. of C's Dec. in 1 hour of Long.	Semi- diameter.	Hor. Par.
			h m s	s	s	° ' "	"	' "	' "
Mar. 19	Moon I. U.	14.3	10 57 47.63	139.39	67.06	N. 7 35 45.3	-651.3	15 59.79	58 42.58
	Moon I. L.	-	11 25 43.46	139.95	67.18	5 21 35.2	-688.8	16 5.76	59 4.46
	σ Leonis	4.1	11 17 14			6 27			
451	B. Leonis	7.0	11 38 33			2 47			
20	Moon I. U.	15.3	11 53 47.08	140.69	67.36	N. 3 0 57.3	-715.7	16 11.07	59 23.97
	10 Virginis	6.2	12 5 49			N. 2 19			
	γ Virg. (mean)	2.9	12 37 50			S. 1 2			
21	Moon II. L.	-	12 24 16.12	141.70	67.60	N. 0 36 4.9	-731.0	16 15.61	59 40.62
	Moon II. U.	16.4	12 52 43.52	142.91	67.91	S. 1 50 37.1	-733.8	16 19.26	59 54.03
	65 Virginis	6.0	13 19 24			4 32			
	80 Virginis	5.6	13 31 35			5 1			
22	Moon II. L.	-	13 21 26.75	144.34	68.28	S. 4 16 34.6	-723.5	16 21.96	60 3.94
	Moon II. U.	17.4	13 50 28.42	145.97	68.70	6 39 8.7	-699.9	16 23.67	60 10.20
235	G. Virginis	6.5	14 13 59			7 11			
	8 B. Libræ	6.9	14 34 56			10 14			
23	Moon II. L.	-	14 19 50.47	147.73	69.16	S. 8 55 38.4	-662.9	16 24.38	60 12.81
	Moon II. U.	18.5	14 49 34.05	149.54	69.63	11 3 26.3	-613.0	16 24.13	60 11.88
	130 B. Libræ	5.9	15 19 43			12 6			
	γ Libræ	4.0	15 31 17			14 32			
24	Moon II. L.	-	15 19 39.13	151.29	70.09	S. 13 0 2.4	-551.1	16 22.97	60 7.64
	Moon II. U.	19.5	15 50 4.20	152.85	70.49	14 43 9.6	-478.4	16 21.00	60 0.41
	98 B. Scorpïi	6.1	16 14 44			14 41			
	φ Ophiuchi	4.4	16 26 48			16 27			
25	Moon II. L.	-	16 20 46.22	154.09	70.83	S. 16 10 48.4	-396.7	16 18.32	59 50.57
	Moon II. U.	20.5	16 51 40.49	154.87	71.04	17 21 21.1	-307.8	16 15.04	59 38.55
	125 B. Ophiuchi	6.2	17 3 51			17 31			
	192 B. Ophiuchi	6.3	17 20 11			18 22			
26	Moon II. L.	-	17 22 40.92	155.10	71.11	S. 18 13 35.9	-214.1	16 11.29	59 24.76
	Moon II. U.	21.6	17 53 40.35	154.69	71.04	18 46 49.0	-117.9	16 7.16	59 9.63
	Y. Sagit. (var.)	5.4	18 16 55			18 54			
121	B. Sagittarii	5.9	18 34 22			21 7			
27	Moon II. L.	-	18 24 31.02	153.64	70.79	S. 19 0 45.8	-21.8	16 2.78	58 53.52
	Moon II. U.	22.6	18 55 5.26	151.96	70.39	18 55 39.8	+72.2	15 58.22	58 36.79
	45 Sagittarii	6.0	19 17 25			18 27			
267	B. Sagittarii	5.8	19 32 39			18 24			
28	Moon II. L.	-	19 25 15.98	149.74	69.84	S. 18 32 10.3	+161.8	15 53.56	58 19.70
	Moon II. U.	23.6	19 54 57.24	147.07	69.18	17 51 19.2	+245.6	15 48.87	58 2.48
	σ Capricor.	5.5	20 15 1			19 21			
	47 B. Capricor.	6.2	20 31 14			16 47			
29	Moon II. L.	-	20 24 4.53	144.10	68.43	S. 16 54 25.4	+322.1	15 44.19	57 45.32
	Moon II. U.	24.7	20 52 35.01	140.96	67.62	S. 15 43 1.2	+390.5	15 39.56	57 28.33

MOON-CULMINATING STARS, 1924. 439

AT TRANSIT AT GREENWICH.

Date.	Name.	Mag.	Apparent Right Ascension.	Var. of C's R.A. in 1 hour of Long.	Sid. Time of Semid. pass [†] Merid.	Apparent Declination.	Var. of C's Dec. in 1 hour of Long.	Semi- diameter.	Hor. Par.
			h m s	s	s	° ' "	+ - "	' "	' "
Mar. 30	Moon II. L.	-	21 20 27.42	137.78	66.80	S. 14 18 47.0	+450.4	15 35.00	57 11.60
	Moon II. U.	25.7	21 47 42.02	134.68	65.98	12 43 27.8	+501.4	15 30.53	56 55.18
31	Moon II. L.	-	22 14 20.35	131.75	65.20	S. 10 58 49.9	+543.5	15 26.16	56 39.12
	Moon II. U.	26.8	22 40 24.97	129.07	64.48	9 6 38.8	+576.9	15 21.88	56 23.44
Apr. 1	Moon II. L.	-	23 5 59.20	126.69	63.83	S. 7 8 37.0	+602.0	15 17.72	56 8.17
	Moon II. U.	27.8	23 31 6.92	124.65	63.27	5 6 24.2	+618.9	15 13.68	55 53.34
2	Moon II. L.	-	23 55 52.32	122.98	62.82	S. 3 1 35.0	+628.1	15 9.77	55 39.00
	Moon II. U.	28.8	0 20 19.81	121.67	62.45	S. 0 55 40.2	+629.9	15 6.01	55 25.20
3	Moon II. L.	-	0 44 33.76	120.72	62.19	N. 1 9 54.3	+624.7	15 2.42	55 12.03
4	Moon I. U.	0.2	1 6 34.46	120.15	62.04	N. 3 13 46.6	+612.9	14 59.03	54 59.58
	Moon I. L.	-	1 30 34.34	119.89	61.58	5 14 39.2	+594.8	14 55.87	54 47.98
5	Moon I. U.	1.2	1 54 32.98	119.94	62.01	N. 7 11 18.9	+570.8	14 52.98	54 37.38
	Moon I. L.	-	2 18 33.99	120.28	62.12	9 2 35.9	+541.1	14 50.41	54 27.93
6	Moon I. U.	2.3	2 42 40.69	120.88	62.31	N. 10 47 24.4	+506.1	14 48.19	54 19.78
	Moon I. L.	-	3 6 55.98	121.70	62.56	12 24 42.0	+466.0	14 46.38	54 13.13
7	Moon I. U.	3.3	3 31 22.27	122.71	62.86	N. 13 53 29.8	+421.2	14 45.03	54 8.17
	Moon I. L.	-	3 56 1.47	123.85	63.19	15 12 52.4	+371.9	14 44.18	54 5.06
8	Moon I. U.	4.3	4 20 54.95	125.08	63.55	N. 16 21 57.8	+318.4	14 43.89	54 3.99
	Moon I. L.	-	4 46 3.56	126.36	63.92	17 19 58.2	+261.1	14 44.19	54 5.11
9	Moon I. U.	5.4	5 11 27.51	127.63	64.29	N. 18 6 9.3	+200.2	14 45.14	54 8.57
	Moon I. L.	-	5 37 6.56	128.86	64.64	18 39 51.8	+136.4	14 46.75	54 14.51
	120 Tauri	5.6	5 29 4			18 29			
	130 Tauri	5.6	5 43 0			17 42			
10	Moon I. U.	6.4	6 2 59.92	130.01	64.96	N. 19 0 31.4	+ 69.8	14 49.07	54 23.01
	Moon I. L.	-	6 29 6.41	131.05	65.24	19 7 39.3	+ 1.2	14 52.10	54 34.15
	15 Geminor.	6.5	6 23 15			20 50			
	74 B. Geminor.	6.2	6 42 57			18 16			
11	Moon I. U.	7.4	6 55 24.61	131.96	65.49	N. 19 0 53.3	- 69.1	14 55.86	54 47.95
	Moon I. L.	-	7 21 52.92	132.74	65.70	18 39 58.1	-140.3	15 0.34	55 4.39
	56 Geminor.	5.2	7 17 28			20 35			
	162 B. Geminor.	5.7	7 27 26			17 15			
12	Moon I. U.	8.5	7 48 29.77	133.39	65.86	N. 18 4 46.0	-211.7	15 5.53	55 23.41
	Moon I. L.	-	8 15 13.80	133.94	65.99	17 15 18.2	-282.8	15 11.37	55 44.87
	ζ Can. (mean)	4.7	8 7 52			17 53			
	δ ² Cancri	6.2	8 21 32			17 18			
13	Moon I. U.	9.5	8 42 3.94	134.42	66.10	N. 16 11 44.8	-352.5	15 17.83	56 8.57
	Moon I. L.	-	9 8 59.67	134.87	66.19	14 54 26.3	-420.1	15 24.83	56 34.24
	α ² Cancri	5.7	8 53 21			15 52			
	π Cancri	5.6	9 11 3			N. 15 15			

440 MOON-CULMINATING STARS, 1924.

AT TRANSIT AT GREENWICH.

Date.	Name.	Mag.	Apparent Right Ascension.	Var. of C's R.A. in 1 hour of Long.	Sld. Time of Semid. pass# Merid.	Apparent Declination.	Var. of C's Dec. in 1 hour of Long.	Semi- diameter.	Hor. Par.
			h m s	s	s	° ' "	— " "	' "	' "
Apr. 14	Moon I. U.	10.5	9 36 0.97	135.36	66.30	N. 13 23 54.3	—484.6	15 32.26	57 1.52
	Moon I. L.	-	10 3 8.56	135.93	66.41	11 40 52.5	—544.9	15 40.01	57 29.96
	γ Leonis	5.0	9 54 9			12 48			
	34 Leonis	6.4	10 7 34			13 44			
15	Moon I. U.	11.6	10 30 23.78	136.64	66.56	N. 9 46 18.0	—599.8	15 47.93	57 59.05
	Moon I. L.	-	10 57 48.68	137.55	66.76	7 41 23.0	—648.1	15 55.87	58 28.18
	l Leonis	5.3	10 45 17			10 57			
	χ Leonis	4.7	11 1 7			7 45			
16	Moon I. U.	12.6	11 25 25.91	138.70	67.02	N. 5 27 35.1	—688.4	16 3.63	58 56.67
	Moon I. L.	-	11 53 18.62	140.13	67.36	3 6 38.9	—719.2	16 11.03	59 23.80
	b Virginis	5.2	11 56 5			4 5			
	10 Virginis	6.2	12 5 49			2 19			
17	Moon I. U.	13.6	12 21 30.30	141.86	67.77	N. 0 40 36.9	—739.2	16 17.85	59 48.84
	Moon I. L.	-	12 50 4.53	143.89	68.25	S. 1 48 11.6	—746.8	16 23.90	60 11.04
	γ Virg. (mean)	2.9	12 37 50			1 2			
	k Virginis	5.7	12 55 46			3 24			
18	Moon I. U.	14.7	13 19 4.74	146.19	68.81	S. 4 17 11.1	—740.8	16 28.99	60 29.74
	88 Virginis	6.5	13 44 21			6 28			
	623 B. Virginis	6.5	14 0 22			8 54			
19	Moon II. L.	-	13 50 52.66	148.80	69.42	S. 6 43 32.9	—720.3	16 32.98	60 44.36
	Moon II. U.	15.7	14 20 53.91	151.42	70.05	9 4 18.8	—684.8	16 35.73	60 54.45
	8 B. Libræ	6.9	14 34 57			10 14			
	18 Libræ	5.9	14 54 48			10 50			
20	Moon II. L.	-	14 51 26.66	154.02	70.69	S. 11 16 27.1	—634.1	16 37.17	60 59.75
	Moon II. U.	16.8	15 22 29.72	156.44	71.28	13 16 59.8	—569.0	16 37.28	61 0.16
	η Libræ	5.5	15 39 49			15 26			
	49 Libræ	5.4	15 56 5			16 19			
21	Moon II. L.	-	15 53 59.78	158.49	71.80	S. 15 3 11.2	—490.8	16 36.09	60 55.78
	Moon II. U.	17.8	16 25 51.31	159.99	72.18	16 32 36.3	—401.7	16 33.67	60 46.93
	78 B. Ophiuchi	6.5	16 51 40			16 41			
	125 B. Ophiuchi	6.2	17 3 51			17 31			
22	Moon II. L.	-	16 57 56.62	160.76	72.39	S. 17 43 18.9	—304.3	16 30.16	60 34.02
	Moon II. U.	18.8	17 30 6.31	160.70	72.42	18 33 58.1	—201.7	16 25.69	60 17.61
	16 G. Sagittarii	6.4	17 55 30			20 20			
	16 Sagittarii	5.9	18 10 43			20 25			
23	Moon II. L.	-	18 2 9.90	159.74	72.23	S. 19 3 52.0	—97.3	16 20.44	59 58.35
	Moon II. U.	19.9	18 33 56.74	157.92	71.83	19 12 58.7	+ 5.7	16 14.59	59 36.89
	173 B. Sagittarii	6.4	18 58 40			19 13			
	d Sagittarii	5.0	19 13 12			19 5			
24	Moon II. L.	-	19 5 16.95	155.33	71.24	S. 19 1 52.4	+104.4	16 8.32	59 13.88
	Moon II. U.	20.9	19 36 2.11	152.11	70.48	18 31 38.6	+196.6	16 1.80	58 49.94
	57 Sagittarii	6.0	19 47 48			19 14			
	σ Capricorni	5.5	20 15 1			S. 19 21			

MOON-CULMINATING STARS, 1924. 441

AT TRANSIT AT GREENWICH.

Date.	Name.	Mag.	Apparent Right Ascension.	Var. of C's R.A. in 1 hour of Long.	Sid. Time of Semid. pass of Merid.	Apparent Declination.	Var. of C's Dec. in 1 hour of Long.	Semi- diameter.	Hor. Par.
			h m s	s	s	° ' "	"	' "	' "
Apr. 25	Moon II. L.	-	20 6 5.92	148.47	69.62	S. 17 43 46.3	+280.6	15 55.17	58 25.61
	Moon II. U.	22.0	20 35 24.33	144.58	68.66	16 40 0.6	+355.4	15 48.57	58 1.38
	21 Capricorni	6.5	20 56 35			17 50			
	29 Capricorni	5.5	21 11 33			15 29			
26	Moon II. L.	-	21 3 55.65	140.64	67.69	S. 15 22 15.2	+420.5	15 42.10	57 37.62
	Moon II. U.	23.0	21 31 40.18	136.81	66.71	13 52 26.3	+476.0	15 35.84	57 14.66
	μ Capricorni	5.2	21 49 9			13 55			
	ε Aquarii	5.4	22 6 34			11 56			
27	Moon II. L.	-	21 58 39.96	133.20	65.78	S. 12 12 29.0	+522.0	15 29.86	56 52.71
	Moon II. U.	24.0	22 24 58.33	129.92	64.91	10 24 13.6	+559.1	15 24.20	56 31.93
	70 Aquarii	6.1	22 44 30			10 57			
	81 Aquarii	6.4	22 57 26			7 28			
28	Moon II. L.	-	22 50 39.57	127.02	64.12	S. 8 29 24.5	+587.7	15 18.88	56 12.44
	Moon II. U.	25.1	23 15 48.59	124.55	63.45	6 29 39.8	+608.4	15 13.94	55 54.28
29	Moon II. L.	-	23 40 30.59	122.52	62.88	S. 4 26 31.8	+621.7	15 9.36	55 37.47
	Moon II. U.	26.1	0 4 50.96	120.95	62.43	2 21 26.5	+628.0	15 5.15	55 22.02
30	Moon II. L.	-	0 28 55.02	119.80	62.09	S. 0 15 45.9	+627.7	15 1.30	55 7.90
	Moon II. U.	27.1	0 52 47.92	119.08	61.87	N. 1 49 12.4	+621.0	14 57.81	54 55.08
May 1	Moon II. L.	-	1 16 34.60	118.76	61.76	N. 3 52 13.9	+608.2	14 54.66	54 43.54
	Moon II. U.	28.2	1 40 19.59	118.80	61.75	5 52 6.3	+589.5	14 51.86	54 33.24
2	Moon II. L.	-	2 4 7.08	119.17	61.83	N. 7 47 39.6	+565.1	14 49.39	54 24.20
	Moon II. U.	29.2	2 28 0.76	119.82	62.00	9 37 45.6	+535.0	14 47.26	54 16.39
3	Moon I. L.	-	2 49 59.35	120.68	62.23	N. 11 21 18.0	+499.5	14 45.48	54 9.85
4	Moon I. U.	0.6	3 14 13.73	121.75	62.52	N. 12 57 12.4	+458.7	14 44.06	54 4.61
	Moon I. L.	-	3 38 41.92	122.96	62.86	14 24 27.1	+412.9	14 43.00	54 0.74
5	Moon I. U.	1.6	4 3 25.17	124.25	63.21	N. 15 42 3.2	+362.3	14 42.35	53 58.33
	Moon I. L.	-	4 28 24.03	125.56	63.58	16 49 5.7	+307.4	14 42.11	53 57.46
6	Moon I. U.	2.6	4 53 38.39	126.82	63.94	N. 17 44 44.4	+248.4	14 42.32	53 58.23
	Moon I. L.	-	5 19 7.42	128.00	64.28	18 28 14.6	+186.1	14 43.01	54 0.76
7	Moon I. U.	3.7	5 44 49.73	129.03	64.57	N. 18 58 58.4	+120.8	14 44.21	54 5.18
	Moon I. L.	-	6 10 43.43	129.89	64.83	19 16 25.0	+ 53.3	14 45.96	54 11.59
8	Moon I. U.	4.7	6 36 46.35	130.56	65.04	N. 19 20 11.4	- 15.8	14 48.28	54 20.12
	Moon I. L.	-	7 2 56.15	131.04	65.19	19 10 3.4	- 85.7	14 51.21	54 30.86
	110 B. Geminor.	6.2	6 58 0			17 52			
	56 Geminorum	5.2	7 17 28			20 35			
9	Moon I. U.	5.7	7 29 10.65	131.35	65.30	N. 18 45 55.2	-155.7	14 54.76	54 43.89
	Moon I. L.	-	7 55 27.91	131.51	65.36	18 7 49.3	-225.1	14 58.95	54 59.27
	209 B. Geminor.	6.2	7 47 32			19 31			
	10 H. Cancri	6.1	8 0 22			N. 19 3			

AT TRANSIT AT GREENWICH.

Date.	Name.	Mag.	Apparent Right Ascension.	Var. of G's R.A. in 1 hour of Long.	Sid. Time of Semid. pass ^g Merid.	Apparent Declination.	Var. of G's Dec. in 1 hour of Long.	Semi- diameter.	Hor. Par.
			h m s	s	s	° ' "	"	' "	' "
May 10	Moon I. U.	6.8	8 21 46.48	131.58	65.41	N. 17 15 56.9	-293.3	15 3.78	55 17.01
	Moon I. L.	-	8 48 5.57	131.60	65.42	16 10 37.3	-359.6	15 9.25	55 37.09
	♂ Cancri	4.2	8 40 22			18 26			
	♂ Cancri	5.7	8 53 21			15 52			
11	Moon I. U.	7.8	9 14 25.11	131.66	65.45	N. 14 52 17.6	-423.2	15 15.34	55 59.42
	Moon I. L.	-	9 40 45.90	131.82	65.49	13 21 33.1	-483.6	15 22.00	56 23.86
	11 Leonis	6.5	9 33 53			14 41			
	11 Leonis	5.0	9 54 9			12 48			
12	Moon I. U.	8.8	10 7 9.58	132.16	65.57	N. 11 39 7.5	-540.0	15 29.17	56 50.19
	Moon I. L.	-	10 33 38.61	132.73	65.71	9 45 53.6	-591.5	15 36.78	57 18.12
	♂ Leonis	3.8	10 28 49			9 42			
	♂ Leonis	5.3	10 45 17			10 57			
13	Moon I. U.	9.9	11 0 16.31	133.61	65.92	N. 7 42 54.4	-637.4	15 44.72	57 47.25
	Moon I. L.	-	11 27 6.65	134.85	66.21	5 31 24.0	-676.5	15 52.85	58 17.11
	♂ Leonis	4.1	11 17 14			6 27			
	451 B. Leonis	7.0	11 38 33			2 47			
14	Moon I. U.	10.9	11 54 14.21	136.49	66.61	N. 3 12 50.8	-707.6	16 1.03	58 47.12
	Moon I. L.	-	12 21 44.00	138.55	67.10	0 48 57.9	-729.5	16 9.06	59 16.59
	10 Virginis	6.2	12 5 49			N. 2 19			
	γ Virg. (mean)	2.9	12 37 50			S. 1 2			
15	Moon I. U.	11.9	12 49 41.16	141.05	67.70	S. 1 38 14.8	-740.7	16 16.75	59 44.80
	Moon I. L.	-	13 18 10.81	143.96	68.39	4 6 29.2	-739.6	16 23.87	60 10.95
	48 Virginis	6.5	13 0 1			3 15			
	66 Virginis	5.7	13 20 37			4 46			
16	Moon I. U.	13.0	13 47 17.53	147.22	69.17	S. 6 33 9.3	-724.7	16 30.22	60 34.24
	Moon I. L.	-	14 17 4.97	150.72	70.00	8 55 22.9	-694.9	16 35.57	60 53.88
	235 G. Virginis	6.5	14 14 0			7 11			
	8 B. Libræ	6.9	14 34 57			10 14			
17	Moon I. U.	14.0	14 47 35.24	154.33	70.85	S. 11 10 5.2	-649.4	16 39.74	61 9.18
	Moon I. L.	-	15 18 48.41	157.83	71.68	13 14 5.1	-587.9	16 42.56	61 19.55
	130 B. Libræ	5.9	15 19 44			12 6			
	γ Libræ	4.0	15 31 18			14 32			
18	Moon II. U.	15.0	15 53 6.68	161.03	72.42	S. 15 4 14.8	-511.2	16 43.94	61 24.61
	98 B. Scorpïi	6.1	16 14 45			14 41			
	24 Scorpïi	5.0	16 37 13			17 36			
19	Moon II. L.	-	16 25 35.92	163.64	73.02	S. 16 37 40.0	-420.9	16 43.82	61 24.16
	Moon II. U.	16.1	16 58 30.62	165.31	73.43	17 51 52.5	-319.6	16 42.21	61 18.25
	192 B. Ophiuchi	6.3	17 20 12			18 22			
	305 B. Ophiuchi	6.3	17 51 29			18 47			
20	Moon II. L.	-	17 31 39.15	165.92	73.59	S. 18 45 1.5	-211.0	16 39.18	61 7.14
	Moon II. U.	17.1	18 4 48.01	165.35	73.49	19 16 2.0	-98.9	16 34.87	60 51.32
	100 B. Sagittarii	5.0	18 27 1			18 27			
	29 Sagittarii	5.3	18 45 11			S. 20 25			

MOON-CULMINATING STARS, 1924. 443

AT TRANSIT AT GREENWICH.

Date.	Name.	Mag.	Apparent Right Ascension.	Var. of C's R.A. in 1 hour of Long.	Sid. Time of Semid. pass ^W Merid.	Apparent Declination.	Var. of C's Dec. in 1 hour of Long.	Semi- diameter.	Hor. Par.
			h m s	s	s	° ' "	"	' "	' "
May 21	Moon II. L.	-	18 37 43.00	163.62	73.12	S. 19 24 39.0	+ 12.3	16 29.45	60 31.41
	Moon II. U.	18.2	19 10 10.60	160.82	72.50	19 11 26.1	+118.8	16 23.11	60 8.14
	267 B. Sagittarii	5.8	19 32 40			18 24			
	57 Sagittarii	6.0	19 47 49			19 14			
22	Moon II. L.	-	19 41 59.20	157.16	71.67	S. 18 37 38.5	+217.6	16 16.07	59 42.33
	Moon II. U.	19.2	20 12 59.98	152.89	70.68	17 45 3.8	+306.4	16 8.56	59 14.77
	61 B. Capricor.	5.9	20 36 18			16 24			
	19 Capricorni	5.7	20 50 31			18 13			
23	Moon II. L.	-	20 43 7.27	148.29	69.60	S. 16 35 50.3	+383.9	16 0.78	58 46.20
	Moon II. U.	20.3	21 12 18.52	143.59	68.46	15 12 15.8	+449.8	15 52.92	58 17.34
	42 Capricorni	5.1	21 37 26			14 23			
	μ Capricorni	5.2	21 49 10			13 54			
24	Moon II. L.	-	21 40 34.01	139.03	67.34	S. 13 36 39.8	+504.3	15 45.14	57 48.78
	Moon II. U.	21.3	22 7 56.25	134.74	66.26	11 51 16.3	+547.9	15 37.57	57 21.01
	58 Aquarii	6.4	22 27 40			11 18			
	70 Aquarii	6.1	22 44 31			10 57			
25	Moon II. L.	-	22 34 29.42	130.86	65.27	S. 9 58 10.1	+581.5	15 30.31	56 54.46
	Moon II. U.	22.3	23 0 18.86	127.46	64.38	7 59 15.7	+606.1	15 23.51	56 29.42
	317 B. Aquarii	6.3	23 16 46			6 19			
	342 B. Aquarii	6.5	23 27 36			4 30			
26	Moon II. L.	-	23 25 30.55	124.58	63.60	S. 5 56 16.3	+622.5	15 17.17	56 6.14
	Moon II. U.	23.4	23 50 10.89	122.24	62.97	3 50 45.1	+631.5	15 11.34	55 44.75
	5 Ceti	6.3	0 4 19			2 52			
	10 Ceti	6.4	0 22 44			0 28			
27	Moon II. L.	-	0 14 26.31	120.42	62.46	S. 1 44 6.4	+633.8	15 6.06	55 25.35
	Moon II. U.	24.4	0 38 23.13	119.13	62.08	N. 0 22 22.1	+629.9	15 1.32	55 7.98
28	Moon II. L.	-	1 2 7.46	118.34	61.83	N. 2 27 28.4	+620.2	14 57.14	54 52.63
	Moon II. U.	25.4	1 25 45.05	118.00	61.71	4 30 4.5	+604.9	14 53.50	54 39.26
29	Moon II. L.	-	1 49 21.21	118.09	61.70	N. 6 29 4.5	+584.2	14 50.38	54 27.83
	Moon II. U.	26.4	2 13 0.80	118.56	61.80	8 23 24.5	+558.2	14 47.77	54 18.26
30	Moon II. L.	-	2 36 48.04	119.36	61.98	N. 10 12 0.9	+527.0	14 45.65	54 10.46
	Moon II. U.	27.5	3 0 46.57	120.43	62.24	11 53 51.1	+490.5	14 43.99	54 4.36
31	Moon II. L.	-	3 24 59.28	121.71	62.56	N. 13 27 52.7	+448.9	14 42.77	53 59.87
	Moon II. U.	28.5	3 49 28.28	123.14	62.92	14 53 4.5	+402.2	14 41.97	53 56.94
June 1	Moon II. L.	-	4 14 14.80	124.62	63.31	N. 16 8 26.9	+350.7	14 41.58	53 55.51
	Moon II. U.	29.5	4 39 19.18	126.10	63.69	17 13 3.3	+294.6	14 41.59	53 55.55
2	Moon I. L.	-	5 2 32.80	127.44	64.05	N. 18 6 1.5	+234.4	14 41.99	53 57.04
3	Moon I. U.	0.9	5 28 9.73	128.69	64.38	N. 18 46 34.8	+170.6	14 42.79	53 59.96
	Moon I. L.	-	5 54 0.47	129.73	64.67	19 14 4.2	+103.9	14 43.99	54 4.36
4	Moon I. U.	2.0	6 20 2.25	130.52	64.89	N. 19 27 59.1	+ 35.0	14 45.59	54 10.23
	Moon I. L.	-	6 46 11.89	131.04	65.05	N. 19 27 59.1	- 35.1	14 47.61	54 17.66

AT TRANSIT AT GREENWICH.

Date.	Name.	Mag.	Apparent Right Ascension.	Var. of G's R.A. in 1 hour of Long.	Sid. Time of Semid. pass [†] Merid.	Apparent Declination.	Var. of G's Dec. in 1 hour of Long.	Semi- diameter.	Hor. Par.
			h m s	s	s	° ' "	"	' "	' "
June 5	Moon I. U.	3.0	7 12 26.09	131.28	65.14	N. 19 13 54.0	-105.7	14 50.07	54 26.68
	Moon I. L.	-	7 38 41.69	131.28	65.17	18 45 44.5	-175.7	14 52.98	54 37.36
6	Moon I. U.	4.0	8 4 55.90	131.06	65.15	N. 18 3 41.9	-244.4	14 56.36	54 49.76
	Moon I. L.	-	8 31 6.63	130.71	65.08	17 8 6.8	-311.0	15 0.23	55 3.96
7	Moon I. U.	5.1	8 57 12.57	130.28	65.01	N. 15 59 29.6	-374.7	15 4.59	55 19.97
	Moon I. L.	-	9 23 13.38	129.87	64.93	14 38 27.9	-435.0	15 9.46	55 37.84
227	B. Cancrī	6.4	9 17 4			15 42			
7	Leonis	6.2	9 31 44			14 43			
8	Moon I. U.	6.1	9 49 9.77	129.56	64.87	N. 13 5 46.9	-491.2	15 14.83	55 57.54
	Moon I. L.	-	10 15 3.46	129.43	64.86	11 22 18.1	-542.8	15 20.68	56 19.04
34	Leonis	6.4	10 7 33			13 44			
44	Leonis	5.9	10 21 15			9 10			
9	Moon I. U.	7.1	10 40 57.19	129.58	64.91	N. 9 28 59.4	-589.4	15 27.00	56 42.22
	Moon I. L.	-	11 6 54.66	130.06	65.05	7 26 55.3	-630.3	15 33.73	57 6.93
χ	Leonis	4.7	11 1 6			7 45			
σ	Leonis	4.1	11 17 14			6 27			
10	Moon I. U.	8.2	11 33 0.35	130.96	65.28	N. 5 17 18.0	-664.8	15 40.82	57 32.95
	Moon I. L.	-	11 59 19.51	132.32	65.63	3 1 28.2	-692.2	15 48.18	57 59.95
b	Virginis	5.2	11 56 4			4 5			
10	Virginis	6.2	12 5 49			2 19			
11	Moon I. U.	9.2	12 25 57.90	134.17	66.10	N. 0 40 57.5	-711.5	15 55.69	58 27.51
	Moon I. L.	-	12 53 1.70	136.55	66.68	S. 1 42 30.5	-721.5	16 3.23	58 55.18
γ	Virg. (mean)	2.9	12 37 50			1 2			
46	Virginis	6.1	12 56 42			2 58			
12	Moon I. U.	10.2	13 20 37.11	139.44	67.39	S. 4 6 57.4	-721.1	16 10.63	59 22.35
	Moon I. L.	-	13 48 50.19	142.82	68.21	6 30 9.1	-708.8	16 17.72	59 48.36
88	Virginis	6.5	13 44 21			6 28			
623	B. Virginis	6.5	14 0 21			8 54			
13	Moon I. U.	11.3	14 17 46.30	146.60	69.11	S. 8 49 35.5	-683.3	16 24.29	60 12.50
	Moon I. L.	-	14 47 29.60	150.66	70.07	11 2 30.6	-643.4	16 30.16	60 34.01
8	B. Libræ	6.9	14 34 57			10 14			
17	Libræ	6.4	14 54 8			10 51			
14	Moon I. U.	12.3	15 18 2.41	154.81	71.04	S. 13 5 56.6	-588.3	16 35.10	60 52.15
	Moon I. L.	-	15 49 24.49	158.83	71.97	14 56 49.8	-517.9	16 38.93	61 6.22
190	B. Libræ	6.5	15 39 11			14 48			
49	Libræ	5.4	15 56 6			16 19			
15	Moon I. U.	13.3	16 21 32.49	162.41	72.79	S. 16 32 9.5	-433.0	16 41.49	61 15.62
	Moon I. L.	-	16 54 19.42	165.26	73.44	17 49 10.1	-335.1	16 42.67	61 19.93
24	Scorpii	5.0	16 37 13			17 36			
29	Ophiuchi	6.4	16 57 27			18 46			
16	Moon I. U.	14.4	17 27 34.77	167.10	73.85	S. 18 45 34.5	-227.5	16 42.38	61 18.87
	16 G. Sagittarii	6.4	17 55 31			20 20			
15	Sagittarii	5.3	18 10 43			S. 20 45			

MOON-CULMINATING STARS, 1924. 445

AT TRANSIT AT GREENWICH.

Date.	Name.	Mag.	Apparent Right Ascension.	Var. of G's R.A. in 1 hour of Long.	Sid. Time of Semi- pass Merid.	Apparent Declination.	Var. of G's Dec. in 1 hour of Long.	Semi- diameter.	Hor. Par.
			h m s	s	s	° ' "	"	' "	' "
June 17	Moon II. L.	-	18 3 32.97	167.71	73.99	S. 19 19 46.0	-113.8	16 40.63	61 12.44
	Moon II. U.	15.4	18 37 2.21	166.94	73.83	19 30 58.8	+1.5	16 37.46	61 0.82
	190 B. Sagittarii	5.4	19 3 51			19 24			
	226 B. Sagittarii	6.4	19 17 12			19 22			
18	Moon II. L.	-	19 10 14.33	164.87	73.37	S. 19 19 20.8	+113.9	16 33.00	60 44.44
	Moon II. U.	16.5	19 42 54.59	161.67	72.65	18 45 51.1	+219.5	16 27.39	60 23.87
	σ Capricorni	5.5	20 15 3			19 21			
	47 B. Capricor.	6.2	20 31 16			16 47			
19	Moon II. L.	-	20 14 50.87	157.59	71.71	S. 17 52 12.8	+315.0	16 20.84	59 59.82
	Moon II. U.	17.5	20 45 54.46	152.94	70.64	16 40 39.1	+398.4	16 13.56	59 33.09
	29 Capricorni	5.5	21 11 34			15 29			
	18 Aquarii	5.5	21 20 4			13 12			
20	Moon II. L.	-	21 16 0.25	148.01	69.47	S. 15 13 41.9	+468.8	16 5.76	59 4.49
	Moon II. U.	18.6	21 45 6.63	143.08	68.29	13 33 58.9	+526.2	15 57.68	58 34.80
	e Aquarii	5.4	22 6 35			11 56			
	σ Aquarii	4.9	22 26 39			11 4			
21	Moon II. L.	-	22 13 14.88	138.35	67.14	S. 11 44 3.9	+571.0	15 49.49	58 4.77
	Moon II. U.	19.6	22 40 28.53	134.00	66.06	9 46 21.5	+604.3	15 41.39	57 35.05
	h Aquarii	5.4	23 1 13			8 6			
	317 B. Aquarii	6.3	23 16 47			6 19			
22	Moon II. L.	-	23 6 52.67	130.12	65.07	S. 7 43 3.0	+627.2	15 33.53	57 6.20
	Moon II. U.	20.6	23 32 33.47	126.78	64.22	5 36 5.2	+641.0	15 26.04	56 38.68
	24 Piscium	6.1	23 49 2			3 35			
	5 Ceti	6.3	0 4 19			2 52			
23	Moon II. L.	-	23 57 37.62	124.01	63.50	S. 3 27 11.2	+646.7	15 19.01	56 12.89
	Moon II. U.	21.7	0 22 12.02	121.82	62.91	1 17 51.8	+645.4	15 12.53	55 49.10
	14 Ceti	5.4	0 31 39			S. 0 55			
	26 Ceti	6.0	0 59 55			N. 0 58			
24	Moon II. L.	-	0 46 23.56	120.20	62.47	N. 0 50 32.7	+637.7	15 6.64	55 27.51
	Moon II. U.	22.7	1 10 18.91	119.12	62.17	2 56 49.9	+624.3	15 1.40	55 8.26
	μ Piscium	5.0	1 26 13			5 45			
	ν Piscium	4.7	1 37 29			5 6			
25	Moon II. L.	-	1 34 4.44	118.55	61.99	N. 4 59 53.9	+605.5	14 56.81	54 51.43
	Moon II. U.	23.7	1 57 46.10	118.46	61.95	6 58 42.5	+581.7	14 52.89	54 37.04
	ξ ¹ Ceti	4.5	2 8 59			8 29			
	389 B. Ceti	6.3	2 25 32			9 14			
26	Moon II. L.	-	2 21 29.30	118.81	62.01	N. 8 52 16.2	+553.1	14 49.63	54 25.06
	Moon II. U.	24.7	2 45 18.94	119.53	62.17	10 39 37.0	+519.6	14 47.01	54 15.46
27	Moon II. L.	-	3 9 19.22	120.57	62.42	N. 12 19 47.2	+481.3	14 45.02	54 8.14
	Moon II. U.	25.8	3 33 33.63	121.87	62.73	13 51 48.7	+438.2	14 43.62	54 3.00
28	Moon II. L.	-	3 58 4.75	123.34	63.09	N. 15 14 44.4	+390.3	14 42.78	53 59.93
	Moon II. U.	26.8	4 22 54.29	124.92	63.47	N. 16 27 37.4	+337.8	14 42.48	53 58.81

446 MOON-CULMINATING STARS, 1924.

AT TRANSIT AT GREENWICH.

Date.	Name.	Mag.	Apparent Right Ascension.	Var. of C's R.A. in 1 hour of Long.	Sid. Time of Semid. pass# Merid.	Apparent Declination.	Var. of C's Dec. in 1 hour of Long.	Semi- diameter.	Hor. Par.
			h m s	s	s	° ' "	"	' "	' "
June 29	Moon II. L.	-	4 48 3.01	126.52	63.87	N. 17 29 32.5	+280.7	14 42.66	53 59.50
	Moon II. U.	27.8	5 13 30.55	128.05	64.24	18 19 37.5	+219.5	14 43.31	54 1.88
30	Moon II. L.	-	5 39 15.61	129.43	64.58	N. 18 57 5.3	+154.6	14 44.39	54 5.83
	Moon II. U.	28.9	6 5 15.94	130.58	64.87	19 21 15.9	+ 86.7	14 45.86	54 11.24
July 1	Moon II. L.	-	6 31 28.49	131.46	65.08	N. 19 31 37.3	+ 16.6	14 47.71	54 18.01
2	Moon I. U.	0.3	6 55 39.21	132.00	65.23	N. 19 27 48.7	- 54.8	14 49.90	54 26.05
	Moon I. L.	-	7 22 5.03	132.25	65.30	19 9 40.5	-126.5	14 52.42	54 35.31
3	Moon I. U.	1.3	7 48 31.93	132.19	65.30	N. 18 37 15.6	-197.4	14 55.26	54 45.72
	Moon I. L.	-	8 14 56.42	131.85	65.23	17 50 49.6	-266.6	14 58.40	54 57.26
4	Moon I. U.	2.3	8 41 15.62	131.32	65.11	N. 16 50 49.3	-332.9	15 1.85	55 9.91
	Moon I. L.	-	9 7 27.51	130.65	64.97	15 37 53.3	-395.7	15 5.60	55 23.65
5	Moon I. U.	3.4	9 33 31.12	129.95	64.82	N. 14 12 48.7	-454.2	15 9.64	55 38.50
	Moon I. L.	-	9 59 26.55	129.31	64.68	12 36 31.6	-507.8	15 13.99	55 54.46
6	Moon I. U.	4.4	10 25 15.07	128.81	64.59	N. 10 50 4.4	-555.8	15 18.64	56 11.53
	Moon I. L.	-	10 50 59.01	128.56	64.55	8 54 35.6	-598.0	15 23.58	56 29.67
7	Moon I. U.	5.4	11 16 41.72	128.62	64.60	N. 6 51 18.9	-633.7	15 28.81	56 48.87
	Moon I. L.	-	11 42 27.48	129.08	64.74	4 41 33.5	-662.7	15 34.31	57 9.05
451	B. Leonis	7.0	11 38 32			2 47			
	♍ Virginis	5.2	11 56 4			4 5			
8	Moon I. U.	6.5	12 8 21.32	129.98	65.00	N. 2 26 44.0	-684.3	15 40.04	57 30.08
	Moon I. L.	-	12 34 28.90	131.37	65.37	0 8 21.9	-698.0	15 45.97	57 51.83
190	B. Virginis	7.4	12 26 43			N. 3 56			
	♍ Virg. (mean)	2.9	12 37 49			S. 1 2			
9	Moon I. U.	7.5	13 0 56.37	133.29	65.87	S. 2 11 53.3	-703.0	15 52.02	58 14.04
	Moon I. L.	-	13 27 50.04	135.74	66.50	4 32 13.0	-698.6	15 58.12	58 36.43
	66 Virginis	5.7	13 20 37			4 46			
	566 B. Virginis	6.4	13 39 58			5 7			
10	Moon I. U.	8.5	13 55 16.22	138.71	67.24	S. 6 50 37.2	-683.7	16 4.17	58 58.64
	Moon I. L.	-	14 23 20.81	142.13	68.08	9 4 55.0	-657.3	16 10.05	59 20.23
235	G. Virginis	6.5	14 14 0			7 11			
	8 B. Libræ	6.9	14 34 57			10 14			
11	Moon I. U.	9.6	14 52 8.86	145.93	69.00	S. 11 12 42.8	-618.5	16 15.63	59 40.70
	Moon I. L.	-	15 21 43.97	149.95	69.96	13 11 26.8	-566.5	16 20.75	59 59.49
130	B. Libræ	5.9	15 19 44			12 6			
	♌ Libræ	4.0	15 31 18			14 32			
12	Moon I. U.	10.6	15 52 7.79	153.93	70.90	S. 14 58 26.0	-501.0	16 25.25	60 16.02
	Moon I. L.	-	16 23 19.27	157.68	71.79	16 30 58.4	-422.2	16 28.98	60 29.69
	98 B. Scorpii	6.1	16 14 45			14 41			
	24 Scorpii	5.0	16 37 13			S. 17 36			

MOON-CULMINATING STARS, 1924. 447

AT TRANSIT AT GREENWICH.

Date.	Name.	Mag.	Apparent Right Ascension.	Var. of C's R.A. in 1 hour of Long.	Sid. Time of Semid. pass ^h Merid.	Apparent Declination.	Var. of C's Dec. in 1 hour of Long.	Semi- diameter.	Hor. Par.
			h m s	s	s	° ' "	"	' "	' "
July 13	Moon I. U.	11.7	16 55 14.19	160.94	72.54	S. 17 46 29.1	-331.0	16 31.78	60 39.95
	Moon I. L.	-	17 27 44.90	163.43	73.12	18 42 41.3	-229.5	16 33.51	60 46.31
	192 B. Ophiuchi	6.3	17 20 13			18 22			
	158 G. Ophiuchi	6.7	17 34 13			21 52			
14	Moon I. U.	12.7	18 04 0.48	164.90	73.44	S. 19 17 48.1	-120.7	16 34.07	60 48.38
	Moon I. L.	-	18 33 47.43	165.22	73.50	19 30 43.1	- 8.2	16 33.41	60 45.94
	95 B. Sagittarii	5.7	18 25 47			18 47			
	128 B. Sagittarii	6.3	18 40 49			21 5			
15	Moon I. U.	13.7	19 6 50.83	164.32	73.26	S. 19 21 7.4	+103.7	16 31.49	60 38.91
	266 B. Sagittarii	6.1	19 32 3			19 1			
	57 Sagittarii	6.0	19 47 50			19 14			
16	Moon I. L.	-	19 39 35.76	162.25	72.76	S. 18 49 32.6	+211.0	16 28.36	60 27.44
	Moon II. U.	14.8	20 14 12.84	159.29	72.02	17 57 16.5	+310.0	16 24.10	60 11.80
	61 B. Capricor.	5.9	20 36 19			16 23			
	94 B. Capricor.	5.7	20 53 28			16 19			
17	Moon II. L.	-	20 45 41.30	155.35	71.09	S. 16 46 15.2	+398.1	16 18.83	59 52.45
	Moon II. U.	15.8	21 16 19.26	150.92	70.06	15 18 52.1	+473.5	16 12.71	59 29.97
	44 Capricorni	6.0	21 38 58			14 45			
	μ Capricorni	5.2	21 49 11			13 54			
18	Moon II. L.	-	21 46 2.62	146.30	68.95	S. 13 37 44.6	+535.5	16 5.91	59 5.01
	Moon II. U.	16.9	22 14 50.50	141.71	67.85	11 45 34.3	+584.1	15 58.62	58 38.27
	167 G. Aquarii	6.3	22 34 25			8 17			
	78 Aquarii	6.3	22 50 39			7 36			
19	Moon II. L.	-	22 42 44.57	137.36	66.79	S. 9 44 57.8	+620.0	15 51.04	58 10.45
	Moon II. U.	17.9	23 9 48.49	133.37	65.81	7 38 21.4	+644.3	15 43.35	57 42.24
	342 B. Aquarii	6.5	23 27 38			4 30			
	20 Piscium	5.6	23 44 4			3 11			
20	Moon II. L.	-	23 36 7.35	129.86	64.93	S. 5 27 57.2	+658.1	15 35.73	57 14.25
	Moon II. U.	18.9	0 1 47.08	126.86	64.18	3 15 42.7	+662.9	15 28.32	56 47.05
	54 B. Ceti	6.3	0 20 38			2 38			
	14 Ceti	5.4	0 31 40			0 55			
21	Moon II. L.	-	0 26 54.06	124.40	63.55	S. 1 3 20.9	+659.5	15 21.25	56 21.12
	Moon II. U.	20.0	0 51 34.95	122.50	63.07	N. 1 7 38.0	+649.2	15 14.64	55 56.86
	33 Ceti	6.1	1 6 40			2 3			
	117 G. Piscium	6.5	1 22 59			3 9			
22	Moon II. L.	-	1 15 56.27	121.14	62.72	N. 3 15 54.7	+632.6	15 8.58	55 34.60
	Moon II. U.	21.0	1 40 4.37	120.29	62.49	5 20 19.1	+610.6	15 3.13	55 14.60
	39 B. Arietis	6.5	2 0 52			7 22			
	ξ Arietis	5.5	2 20 45			10 16			
23	Moon II. L.	-	2 4 5.26	119.93	62.40	N. 7 19 47.5	+583.4	14 58.34	54 57.05
	Moon II. U.	22.0	2 28 4.56	120.02	62.41	9 13 20.9	+551.4	14 54.26	54 42.06
	μ Ceti	4.4	2 40 51			9 48			
	147 B. Arietis	5.8	3 2 14			N. 12 54			

448 MOON-CULMINATING STARS, 1924.

AT TRANSIT AT GREENWICH.

Date.	Name.	Mag.	Apparent Right Ascension.	Var. of G's R.A. in 1 hour of Long.	Sid. Time of Semi- pass Merid.	Apparent Declination.	Var. of G's Dec. in 1 hour of Long.	Semi- diameter.	Hor. Par.
			h m s	s	s	° ' "	"	' "	' "
July 24	Moon II. L.	-	2 52 7.34	120.51	62.53	N. 11 0 3.6	+514.9	14 50.90	54 29.72
	Moon II. U.	23.1	3 16 18.11	121.34	62.74	12 39 1.6	+474.0	14 48.26	54 20.03
	30 B. Tauri	6.4	3 33 32			15 11			
	λ Tauri	3.3	3 56 29			12 17			
25	Moon II. L.	-	3 40 40.70	122.47	63.01	N. 14 9 21.8	+428.6	14 46.33	54 12.97
	Moon II. U.	24.1	4 5 18.17	123.81	63.34	15 30 11.7	+378.9	14 45.11	54 8.49
26	Moon II. L.	-	4 30 12.72	125.30	63.71	N. 16 40 39.3	+324.9	14 44.57	54 6.49
	Moon II. U.	25.1	4 55 25.59	126.85	64.08	17 39 53.7	+267.2	14 44.67	54 6.87
27	Moon II. L.	-	5 20 57.04	128.38	64.44	N. 18 27 6.6	+204.7	14 45.38	54 9.46
	Moon II. U.	26.2	5 46 46.32	129.81	64.78	19 1 33.2	+139.1	14 46.65	54 14.11
28	Moon II. L.	-	6 12 51.71	131.06	65.07	N. 19 22 33.9	+70.6	14 48.43	54 20.65
	Moon II. U.	27.2	6 39 10.67	132.06	65.30	19 29 37.6	-0.3	14 50.67	54 28.87
29	Moon II. L.	-	7 5 39.95	132.77	65.46	N. 19 22 21.6	-72.5	14 53.32	54 38.59
	Moon II. U.	28.2	7 32 15.89	133.17	65.54	19 0 35.2	-145.2	14 56.32	54 49.61
30	Moon II. L.	-	7 58 54.71	133.25	65.55	N. 18 24 20.0	-217.2	14 59.62	55 1.74
	Moon II. U.	29.3	8 25 32.80	133.05	65.49	17 33 50.5	-287.4	15 3.17	55 14.77
31	Moon I. L.	-	8 49 56.30	132.64	65.38	N. 16 29 34.9	-354.7	15 6.93	55 28.57
Aug. 1	Moon I. U.	0.7	9 16 24.61	132.05	65.24	N. 15 12 14.0	-418.1	15 10.86	55 42.97
	Moon I. L.	-	9 42 45.27	131.38	65.08	13 42 40.1	-476.7	15 14.90	55 57.82
2	Moon I. U.	1.7	10 8 57.78	130.71	64.92	N. 12 1 56.3	-529.6	15 19.04	56 13.02
	Moon I. L.	-	10 35 2.78	130.14	64.80	10 11 14.1	-576.3	15 23.26	56 28.48
3	Moon I. U.	2.8	11 1 1.92	129.75	64.73	N. 8 11 53.1	-616.0	15 27.52	56 44.13
	Moon I. L.	-	11 26 57.89	129.63	64.73	6 5 18.7	-648.4	15 31.81	56 59.89
4	Moon I. U.	3.8	11 52 54.27	129.83	64.81	N. 3 53 2.3	-673.0	15 36.13	57 15.73
	Moon I. L.	-	12 18 55.41	130.43	65.00	N. 1 36 40.1	-689.3	15 40.46	57 31.60
5	Moon I. U.	4.8	12 45 6.25	131.46	65.29	S. 0 42 6.5	-697.0	15 44.77	57 47.45
	Moon I. L.	-	13 11 32.19	132.95	65.70	3 1 31.3	-695.6	15 49.07	58 3.23
	48 Virginis	6.5	13 0 0			3 15			
	65 Virginis	6.0	13 19 23			4 32			
6	Moon I. U.	5.9	13 38 18.82	134.91	66.23	S. 5 19 42.0	-684.6	15 53.32	58 18.83
	Moon I. L.	-	14 5 31.72	137.32	66.86	7 34 40.1	-663.4	15 57.49	58 34.14
	623 B. Virginis	6.5	14 0 21			8 54			
	235 G. Virginis	6.5	14 13 59			7 11			
7	Moon I. U.	6.9	14 33 16.13	140.15	67.58	S. 9 44 21.4	-631.6	16 1.54	58 49.00
	Moon I. L.	-	15 1 36.58	143.31	68.36	11 46 34.7	-588.7	16 5.42	59 3.22
	17 Libræ	6.4	14 54 8			10 51			
	130 B. Libræ	5.9	15 19 43			12 6			
8	Moon I. U.	8.0	15 30 36.42	146.69	69.19	S. 13 39 4.3	-534.3	16 9.05	59 16.56
	Moon I. L.	-	16 0 17.42	150.14	70.02	15 19 31.9	-468.4	16 12.37	59 28.72
	203 B. Libræ	6.2	15 52 18			14 36			
	91 B. Scorpil	6.1	16 11 36			S. 14 40			

MOON-CULMINATING STARS, 1924. 449

AT TRANSIT AT GREENWICH.

Date.	Name.	Mag.	Apparent Right Ascension.	Var. of C's R.A. in 1 hour of Long.	Sid. Time of Semid. pass ^g Merid.	Apparent Declination.	Var. of C's Dec. in 1 hour of Long.	Semi- diameter.	Hor. Par.
			h m s	s	s	° ' "	"	' "	' "
Aug. 9	Moon I. U.	9.0	16 30 39.18	153.45	70.80	S. 16 45 40.5	-391.2	16 15 27	59 39.38
	Moon I. L.	-	17 1 38.84	156.41	71.48	17 55 20.8	-303.9	16 17.67	59 48.18
	90 B. Ophiuchi	6.5	16 55 21			18 8			
	164 B. Ophiuchi	6.0	17 15 30			17 41			
10	Moon I. U.	10.0	17 33 10.75	158.79	72.01	S. 18 46 38.4	-207.8	16 19.47	59 54.78
	Moon I. L.	-	18 5 6.64	160.37	72.35	19 18 2.1	-105.3	16 20.57	59 58.82
	16 G. Sagittarii	6.4	17 55 31			20 20			
	64 B. Sagittarii	6.1	18 11 5			18 41			
11	Moon I. U.	11.1	18 37 15.99	161.01	72.47	S. 19 28 32.0	+0.7	16 20.89	60 0.02
	Moon I. L.	-	19 9 26.85	160.62	72.34	19 17 45.4	+106.8	16 20.37	59 58.11
	187 B. Sagittarii	6.4	19 2 44			18 51			
	226 B. Sagittarii	6.4	19 17 13			19 22			
12	Moon I. U.	12.1	19 41 26.94	159.22	71.98	S. 18 46 0.6	+209.8	16 18.97	59 52.97
	Moon I. L.	-	20 13 4.63	156.92	71.41	17 54 15.6	+306.4	16 16.67	59 44.51
	σ Capricorni	5.5	20 15 3			19 21			
	π Capricorni	5.2	20 23 1			18 27			
13	Moon I. U.	13.2	20 44 10.07	153.88	70.66	S. 16 44 3.8	+393.9	16 13.49	59 32.83
	Moon I. L.	-	21 14 35.75	150.33	69.80	15 17 26.5	+470.3	16 9.47	59 18.10
	θ Capricorni	4.2	21 1 43			17 32			
	18 Aquarii	5.5	21 20 5			13 12			
14	Moon II. U.	14.2	21 46 34.56	146.33	68.86	S. 13 36 44.1	+534.6	16 4.71	59 0.62
	e Aquarii	5.4	22 6 36			11 56			
	σ Aquarii	4.9	22 26 40			11 4			
15	Moon II. L.	-	22 15 26.92	142.41	67.91	S. 11 44 26.9	+586.1	15 59.30	58 40.76
	Moon II. U.	15.2	22 43 32.70	138.59	66.97	9 43 6.6	+625.2	15 53.37	58 18.99
	h Aquarii	5.4	23 1 15			8 6			
	317 B. Aquarii	6.3	23 16 48			6 19			
16	Moon II. L.	-	23 10 54.03	135.02	66.09	S. 7 35 10.8	+652.2	15 47.06	57 55.83
	Moon II. U.	16.3	23 37 34.52	131.79	65.29	5 22 57.8	+668.2	15 40.51	57 31.79
	27 Piscium	5.1	23 54 49			3 58			
	5 Ceti	6.3	0 4 21			2 52			
17	Moon II. L.	-	0 3 38.73	128.98	64.59	S. 3 8 34.3	+674.1	15 33.87	57 7.42
	Moon II. U.	17.3	0 29 11.94	126.63	64.00	S. 0 53 54.4	+671.1	15 27.28	56 43.24
	26 Ceti	6.0	0 59 56			N. 0 58			
	33 Ceti	6.1	1 6 41			2 3			
18	Moon II. L.	-	0 54 19.73	124.75	63.54	N. 1 19 20.5	+660.1	15 20.87	56 19.73
	Moon II. U.	18.3	1 19 7.75	123.34	63.19	3 29 40.9	+642.2	15 14.77	55 57.34
	ν Piscium	4.7	1 37 31			5 6			
	39 B. Arietis	6.5	2 0 52			7 22			
19	Moon II. L.	-	1 43 41.60	122.38	62.97	N. 5 35 47.2	+617.9	15 9.08	55 36.46
	Moon II. U.	19.4	2 8 6.67	121.87	62.86	7 36 28.9	+588.1	15 3.90	55 17.43
	389 B. Ceti	6.3	2 25 34			9 14			
	μ Ceti	4.4	2 40 52			N. 9 48			

450 MOON-CULMINATING STARS, 1924.

AT TRANSIT AT GREENWICH.

Date.	Name.	Mag.	Apparent Right Ascension.	Var. of C's R.A. in 1 hour of Long.	Sid. Time of Semid. pass ^g Merid.	Apparent Declination.	Var. of C's Dec. in 1 hour of Long.	Semi- diameter.	Hor. Par.
			h m s	s	s	° ' "	"	' "	' "
Aug. 20	Moon II. L.	-	2 32 28.06	121.76	62.85	N. 9 30 42.3	+553.3	14 59.30	55 0.54
	Moon II. U.	20.4	2 56 50.43	122.03	62.93	11 17 29.3	+513.8	14 55.34	54 46.01
	8 B. Tauri	6.2	3 20 1			12 22			
	30 B. Tauri	6.4	3 33 33			15 11			
	21 Moon II. L.	-	3 21 17.96	122.61	63.10	N. 12 55 55.4	+469.9	14 52.07	54 34.02
	Moon II. U.	21.4	3 45 54.28	123.48	63.33	14 25 9.7	+421.8	14 49.52	54 24.68
	179 B. Tauri	5.9	4 3 25			14 58			
	58 Tauri	5.4	4 16 19			14 55			
22	Moon II. L.	-	4 10 42.33	124.56	63.62	N. 15 44 23.1	+369.8	14 47.73	54 18.08
	Moon II. U.	22.5	4 35 44.37	125.80	63.93	16 52 48.3	+313.8	14 46.68	54 14.24
	318 B. Tauri	5.7	4 53 0			17 2			
	353 B. Tauri	6.5	5 16 29			19 44			
23	Moon II. L.	-	5 1 1.86	127.12	64.27	N. 17 49 40.2	+254.2	14 46.38	54 13.14
	Moon II. U.	23.5	5 26 35.42	128.47	64.60	18 34 15.9	+191.2	14 46.82	54 14.74
	130 Tauri	5.6	5 43 1			17 42			
	64 Orionis	5.1	5 58 58			19 41			
24	Moon II. L.	-	5 52 24.81	129.75	64.90	N. 19 5 56.1	+125.0	14 47.96	54 18.94
	Moon II. U.	24.5	6 18 29.03	130.92	65.18	19 24 6.0	+56.2	14 49.78	54 25.61
25	Moon II. L.	-	6 44 46.27	131.92	65.40	N. 19 28 16.8	-14.7	14 52.22	54 34.57
	Moon II. U.	25.6	7 11 14.18	132.69	65.57	19 18 7.8	-87.0	14 55.23	54 45.62
26	Moon II. L.	-	7 37 49.96	133.23	65.67	N. 18 53 27.6	-159.8	14 58.75	54 58.54
	Moon II. U.	26.6	8 4 30 70	133.52	65.72	18 14 15.6	-232.1	15 2.70	55 13.05
27	Moon II. L.	-	8 31 13.49	133.58	65.70	N. 17 20 43.3	-303.0	15 7.02	55 28.87
	Moon II. U.	27.6	8 57 55.78	133.44	65.64	16 13 14.7	-371.3	15 11.60	55 45.71
28	Moon II. L.	-	9 24 35 51	133.16	65.55	N. 14 52 27.3	-435.9	15 16.38	56 3.25
	Moon II. U.	28.7	9 51 11 40	132.81	65.45	13 19 11.1	-495.9	15 21.26	56 21.17
29	Moon II. L.	-	10 17 43.03	132.46	65.35	N. 11 34 28.8	-550.1	15 26.17	56 39.17
30	Moon I. U.	0.2	10 42 0 14	132.18	65.27	N. 9 39 34.5	-597.7	15 31.02	56 56.96
	Moon I. L.	-	11 8 25.33	132.05	65.24	7 35 53.1	-637.9	15 35.73	57 14.26
31	Moon I. U.	1.2	11 34 50 06	132.12	65.28	N. 5 24 58.9	-669.7	15 40.25	57 30.85
	Moon I. L.	-	12 1 17.20	132.46	65.39	3 8 34.7	-692.8	15 44.52	57 46.53
Sept. 1	Moon I. U.	2.2	12 27 50.36	133.12	65.58	N. 0 48 30.5	-706.3	15 48.50	58 1.14
	Moon I. L.	-	12 54 33.57	134.14	65.87	S. 1 33 17.2	-709.9	15 52.16	58 14.58
2	Moon I. U.	3.3	13 21 31.21	135.53	66.26	S. 3 54 46.6	-703.2	15 55.49	58 26.77
	Moon I. L.	-	13 48 47.73	137.29	66.73	6 13 51.5	-685.8	15 58.46	58 37.67
3	Moon I. U.	4.3	14 16 27.43	139.38	67.29	S. 8 28 22.1	-657.5	16 1.07	58 47.28
	Moon I. L.	-	14 44 34.08	141.77	67.91	10 36 6.3	-618.1	16 3.34	58 55.61
4	Moon I. U.	5.3	15 13 10.73	144.37	68.58	S. 12 34 51.5	-567.6	16 5.27	59 2.67
	Moon I. L.	-	15 42 19.21	147.05	69.26	14 22 26.3	-506.4	16 6.85	59 8.49
γ Libræ		4.0	15 31 18			14 32			
	202 B. Libræ	6.4	15 52 0			S. 14 11			

MOON-CULMINATING STARS, 1924. 451

AT TRANSIT AT GREENWICH.

Date.	Name.	Mag.	Apparent Right Ascension.	Var. of G's R.A. in 1 hour of Long.	Sid. Time of Semi- pass ^s Merid.	Apparent Declination.	Var. of G's Dec. in 1 hour of Long.	Semi- diameter.	Hor. Par.
			h m s	s	s	° ' "	"	' "	' "
Sept. 5	Moon I. U.	6.4	16 11 59.82	149.70	69.92	S. 15 56 44.0	-434.9	16 8.10	59 13.08
	Moon I. L.	-	16 42 11.08	152.13	70.51	17 15 46.4	-354.0	16 9.02	59 16.42
	24 Scorpii	5.0	16 37 12			17 36			
	78 B. Ophiuchi	6.5	16 51 40			16 41			
6	Moon I. U.	7.4	17 12 49.42	154.18	71.00	S. 18 17 48.3	-265.1	16 9.58	59 18.49
	Moon I. L.	-	17 43 49.31	155.69	71.35	19 1 23.2	-169.8	16 9.78	59 19.22
	158 G. Ophiuchi	6.7	17 34 13			21 52			
	305 B. Ophiuchi	6.3	17 51 29			18 47			
7	Moon I. U.	8.4	18 15 3.30	156.52	71.52	S. 19 25 27.9	-70.5	16 9.59	59 18.54
	Moon I. L.	-	18 46 22.64	156.57	71.51	19 29 27.6	+30.6	16 9.00	59 16.37
	128 B. Sagittarii	6.3	18 40 49			21 5			
	36 Sagittarii	5.1	18 52 52			20 45			
8	Moon I. U.	9.5	19 17 37.85	155.83	71.30	S. 19 13 18.5	+130.6	16 7.97	59 12.58
	Moon I. L.	-	19 48 39.52	154.33	70.91	18 37 28.8	+226.9	16 6.47	59 7.10
	f Sagittarii	5.1	19 41 58			19 56			
	57 Sagittarii	6.0	19 47 50			19 14			
9	Moon I. U.	10.5	20 19 19.10	152.17	70.35	S. 17 42 57.4	+317.1	16 4.49	58 59.82
	Moon I. L.	-	20 49 29.47	149.49	69.68	16 31 9.5	+399.3	16 2.01	58 50.73
	81 B. Capricorn	6.4	20 45 5			18 19			
	21 Capricorni	6.5	20 56 38			17 49			
10	Moon I. U.	11.6	21 19 5.39	146.45	68.90	S. 15 3 51.8	+471.9	15 59.03	58 39.79
	Moon I. L.	-	21 48 3.63	143.24	68.09	13 23 7.0	+533.7	15 55.56	58 27.05
	45 Capricorni	5.8	21 39 55			15 6			
	4 Aquarii	4.4	22 2 23			14 14			
11	Moon I. U.	12.6	22 16 22.95	139.99	67.27	S. 11 31 6.7	+584.4	15 51.63	58 12.61
	Moon I. L.	-	22 44 3.81	136.85	66.46	9 30 6.5	+623.7	15 47.27	57 56.62
	213 B. Aquarii	6.5	22 39 7			8 42			
	78 Aquarii	6.3	22 50 39			7 36			
12	Moon I. U.	13.6	23 11 8.17	133.92	65.72	S. 7 22 21.2	+652.0	15 42.55	57 39.29
	342 B. Aquarii	6.5	23 27 39			4 30			
	20 Piscium	5.6	23 44 5			3 11			
13	Moon II. L.	-	23 39 49.16	131.18	65.05	S. 5 10 1.1	+669.6	15 37.53	57 20.88
	Moon II. U.	14.7	0 549.27	128.90	64.47	2 55 9.8	+677.3	15 32.31	57 1.70
	54 B. Ceti	6.3	0 20 39			2 38			
	14 Ceti	5.4	0 31 41			0 55			
14	Moon II. L.	-	0 31 24.30	127.00	63.99	S. 0 39 42.5	+675.8	15 26.97	56 42.09
	Moon II. U.	15.7	0 56 38.86	125.49	63.61	N. 1 34 35.0	+665.8	15 21.60	56 22.40
	f Piscium	5.3	1 13 55			3 13			
	μ Piscium	5.0	1 26 15			5 45			
15	Moon II. L.	-	1 21 37.68	124.37	63.34	N. 3 46 6.0	+648.2	15 16.31	56 3.00
	Moon II. U.	16.7	1 46 25.34	123.63	63.17	5 53 23.3	+623.6	15 11.21	55 44.25
	64 Ceti	5.8	2 7 23			8 13			
	ξ Arietis	5.5	2 20 47			N. 10 16			

452 MOON-CULMINATING STARS, 1924.

AT TRANSIT AT GREENWICH.

Date.	Name.	Mag	Apparent Right Ascension.	Var. of R.A. in 1 hour of Long.	Sid. Time of Semi- pass. Merid.	Apparent Declination	Var. of Dec. in 1 hour of Long.	Semi- diameter.	Hor. Par.
			h m s	s	s	° ' "	"	' "	' "
Sept. 16	Moon II. L.	-	2 11 6.30	123.25	63.10	N. 7 55 7.6	+592.8	15 6.37	55 26.51
	Moon II. U.	17.8	2 35 44.64	123.19	63.12	9 50 7.7	+556.3	15 1.90	55 10.11
	λ Ceti	4.7	2 55 41			8 37			
	147 B. Arietis	5.8	3 2 16			12 54			
17	Moon II. L.	-	3 0 24.11	123.43	63.21	N. 11 37 18.7	+514.7	14 57.88	54 55.35
	Moon II. U.	18.8	3 25 8.00	123.92	63.37	13 15 41.8	+468.4	14 54.39	54 42.52
	30 B. Tauri	6.4	3 33 34			15 11			
	179 B. Tauri	5.9	4 3 26			14 58			
18	Moon II. L.	-	3 49 59.10	124.62	63.58	N. 14 44 23.0	+417.8	14 51.48	54 31.86
	Moon II. U.	19.8	4 14 59.62	125.48	63.84	16 2 33.1	+363.3	14 49.22	54 23.57
	89 Tauri	5.8	4 33 50			15 53			
	1 Tauri	5.1	4 46 58			18 43			
19	Moon II. L.	-	4 40 11.14	126.45	64.11	N. 17 9 26.7	+305.1	14 47.65	54 17.81
	Moon II. U.	20.9	5 5 34.64	127.47	64.39	18 4 22.5	+243.7	14 46.81	54 14.72
	115 Tauri	5.3	5 22 46			17 54			
	130 Tauri	5.6	5 43 2			17 42			
20	Moon II. L.	-	5 31 10.44	128.49	64.67	N. 18 46 43.2	+179.3	14 46.72	54 14.38
	Moon II. U.	21.9	5 56 58.25	129.46	64.93	19 15 56.1	+112.4	14 47.38	54 16.83
	292 B. Orionis	6.5	6 17 1			17 48			
	ν Geminorum	4.1	6 24 28			20 16			
21	Moon II. L.	-	6 22 57.21	130.34	65.15	N. 19 31 33.1	+43.4	14 48.79	54 22.07
	Moon II. U.	22.9	6 49 5.99	131.10	65.33	19 33 12.3	-27.1	14 50.99	54 30.07
	ζ Gem. (var.)	3.7	6 59 37			20 41			
	56 Geminorum	5.2	7 17 29			20 35			
22	Moon II. L.	-	7 15 22.94	131.70	65.47	N. 19 20 38.2	-98.7	14 53.89	54 40.72
	Moon II. U.	24.0	7 41 46.20	132.15	65.56	18 53 43.2	-170.5	14 57.48	54 53.89
	10 H. Cancri	6.1	8 0 23			19 3			
	d ¹ Cancri	5.9	8 19 2			18 35			
23	Moon II. L.	-	8 8 13.90	132.44	65.61	N. 18 12 27.7	-241.9	15 1.71	55 9.39
	Moon II. U.	25.0	8 34 44.32	132.61	65.63	17 17 2.1	-312.1	15 6.50	55 26.97
24	Moon II. L.	-	9 1 16.12	132.68	65.61	N. 16 7 46.6	-380.1	15 11.78	55 46.36
	Moon II. U.	26.0	9 27 48.42	132.70	65.58	14 45 12.6	-445.0	15 17.46	56 7.20
25	Moon II. L.	-	9 54 20.94	132.73	65.56	N. 13 10 2.9	-505.9	15 23.43	56 29.10
	Moon II. U.	27.1	10 20 54.08	132.81	65.55	11 23 12.4	-561.6	15 29.57	56 51.65
26	Moon II. L.	-	10 47 28.97	133.03	65.58	N. 9 25 48.4	-611.3	15 35.76	57 14.38
	Moon II. U.	28.1	11 14 7.41	133.42	65.65	7 19 11.2	-653.7	15 41.88	57 36.82
27	Moon II. L.	-	11 40 51.87	134.04	65.80	N. 5 4 53.1	-687.9	15 47.78	57 58.49
	Moon II. U.	29.1	12 7 45.34	134.93	66.02	2 44 39.6	-712.8	15 53.35	58 18.92
28	Moon I. L.	-	12 32 38.67	136.05	66.32	N. 0 20 27.8	-727.4	15 58.46	58 37.69

MOON-CULMINATING STARS, 1924. 453

AT TRANSIT AT GREENWICH.

Date.	Name.	Mag	Apparent Right Ascension.	Var. of R.A. in 1 hour of Long.	Sid. Time of Semid. pass- Merid.	Apparent Declination.	Var. of Dec. in 1 hour of Long.	Semi- diameter.	Hor. Par.
			h m s	s	s	° ' "	"	' "	' "
Sept. 29	Moon I. U.	0.7	13 0 0.07	137.56	66.70	S. 2 534.3	-731.0	16 3.02	58 54.42
	Moon I. L.	-	13 27 41.24	139.36	67 17	4 31 8.8	-722.7	16 6.93	59 8.79
30	Moon I. U.	1.7	13 55 45.77	141.44	67 71	S. 6 53 50.3	-702.1	16 10.15	59 20.59
	Moon I. L.	-	14 24 16.77	143.76	68 31	9 11 8.2	-668.8	16 12.62	59 29.67
Oct. 1	Moon I. U.	2.8	14 53 16.48	146.21	68.95	S. 11 20 30.6	-622.8	16 14.35	59 36.00
	Moon I. L.	-	15 22 46.04	148.71	69.58	13 19 27.1	-564.6	16 15.33	59 39.61
2	Moon I. U.	3.8	15 52 45.02	151.10	70.20	S. 15 5 34.3	-494.8	16 15.61	59 40.63
	Moon I. L.	-	16 23 11.31	153.23	70 74	16 36 40.4	-414.6	16 15.24	59 39.25
3	Moon I. U.	4.8	16 54 0.84	154.94	71.18	S. 17 50 50.7	-325.8	16 14.26	59 35.69
	Moon I. L.	-	17 25 7.69	156.09	71.47	18 46 32.7	-230.3	16 12.77	59 30.21
192 B. Ophiuchi		6.3	17 20 11			18 22			
	158 G. Ophiuchi	6.7	17 34 12			21 52			
4	Moon I. U.	5.9	17 56 24.37	156.56	71.60	S. 19 22 40.9	-130.6	16 10.83	59 23.07
	Moon I. L.	-	18 27 42.30	156.29	71.54	19 38 39.8	-29.2	16 8.50	59 14.53
21 Sagittari		5.0	18 20 51			20 35			
	121 B. Sagittari	5.9	18 34 23			21 7			
5	Moon I. U.	6.9	18 58 52.40	155.27	71.29	S. 19 34 24.9	+71.3	16 5.85	59 4.81
	Moon I. L.	-	19 29 45.94	153.55	70.87	19 10 22.3	+168.4	16 2.94	58 54.11
45 Sagittari		6.0	19 17 27			18 27			
	267 B. Sagittari	5.8	19 32 41			18 24			
6	Moon I. U.	8.0	20 0 15.13	151.23	70.29	S. 18 27 26.4	+259.9	15 59.80	58 42.61
	Moon I. L.	-	20 30 13.69	148.47	69.60	17 26 54.5	+344.1	15 56.48	58 30.41
7 Capricorn		5.2	20 23 1			18 27			
	61 B. Capricor.	5.9	20 36 19			16 23			
7	Moon I. U.	9.0	20 59 37.18	145.41	68.82	S. 16 10 22.9	+419.7	15 52.99	58 17.62
	Moon I. L.	-	21 28 23.04	142.23	68.01	14 39 40.2	+485.8	15 49.36	58 4.30
18 Aquari		5.5	21 20 5			13 12			
	42 Capricorni	5.1	21 37 28			14 23			
8	Moon I. U.	10.0	21 56 30.62	139.05	67.19	S. 12 56 43.6	+541.9	15 45.60	57 50.50
	Moon I. L.	-	22 24 0.79	136.01	66.39	11 3 34.2	+587.9	15 41.72	57 36.25
15 Aquari		6.1	22 14 59			13 41			
	167 G. Aquari	6.3	22 34 25			8 17			
9	Moon I. U.	11.1	22 50 55.75	133.20	65.64	S. 9 2 13.4	+623.9	15 37.73	57 21.59
	Moon I. L.	-	23 17 18.76	130.69	64.97	6 54 40.4	+650.0	15 33.63	57 6.56
7 Aquari		4.4	23 10 26			6 27			
	337 B. Aquari	6.4	23 25 39			4 57			
10	Moon I. U.	12.1	23 43 13.71	128.53	64.40	S. 4 42 51.5	+666.6	15 29.45	56 51.22
	Moon I. L.	-	0 8 44.93	126.74	63.92	2 28 37.8	+674.2	15 25.21	56 35.66
4 Ceti		6.3	0 3 53			2 58			
	54 B. Ceti	6.3	0 20 39			S. 2 58			

AT TRANSIT AT GREENWICH.

Date.	Name.	Mag.	Apparent Right Ascension.	Var. of C's R.A. in 1 hour of Long.	Sid. Time of Semid. pass ^g Merid.	Apparent Declination.	Var. of C's Dec. in 1 hour of Long.	Semi- diameter.	Hor. Par.
			h m s	s	s	° ' "	"	' "	' "
Oct. 11	Moon I. U.	13.1	0 33 56.98	125.33	63.54	S. 0 13 45.0	+673.2	15 20.94	56 19.96
	Moon I. L.	-	0 58 54.43	124.30	63.26	N. 2 0 6.8	+664.1	15 16.66	56 4.28
	26 Ceti	6.0	0 59 57			0 58			
	33 Ceti	6.1	1 6 42			2 3			
	12 Moon II. U.	14.2	1 25 47.91	123.62	63.09	N. 4 11 22.9	+647.4	15 12.43	55 48.76
	♑ Piscium	4.7	1 37 31			5 6			
	39 B. Arietis	6.5	2 0 53			7 23			
	13 Moon II. L.	-	1 50 29.11	123.30	63.01	N. 6 18 35.3	+623.5	15 8.30	55 33.58
	Moon II. U.	15.2	2 15 8.42	123.29	63.02	8 20 21.1	+593.0	15 4.31	55 18.95
	389 B. Ceti	6.3	2 25 35			9 14			
	μ Ceti	4.4	2 40 53			9 48			
	14 Moon II. L.	-	2 39 49.24	123.55	63.11	N. 10 15 23.7	+556.4	15 0.54	55 5.10
	Moon II. U.	16.2	3 4 34.50	124.03	63.26	12 2 32.0	+514.1	14 57.04	54 52.25
	8 B. Tauri	6.2	3 20 2			12 22			
	30 B. Tauri	6.4	3 33 35			15 11			
	15 Moon II. L.	-	3 29 26.58	124.68	63.46	N. 13 40 41.1	+466.6	14 53.87	54 40.62
	Moon II. U.	17.3	3 54 27.24	125.45	63.69	15 8 51.1	+414.4	14 51.10	54 30.47
	48 Tauri	6.3	4 11 30			15 13			
	264 B. Tauri	4.8	4 26 15			16 2			
	16 Moon II. L.	-	4 19 37.60	126.29	63.94	N. 16 26 8.8	+357.9	14 48.80	54 22.02
	Moon II. U.	18.3	4 44 58.20	127.14	64.21	17 31 46.8	+297.8	14 47.02	54 15.48
	♉ Tauri	5.0	5 3 0			18 33			
	353 B. Tauri	6.5	5 16 30			19 44			
	17 Moon II. L.	-	5 10 28.89	127.96	64.46	N. 18 25 3.4	+234.5	14 45.81	54 11.06
	Moon II. U.	19.3	5 36 9.05	128.71	64.68	19 5 23.9	+168.6	14 45.23	54 8.94
	57 Orionis	5.8	5 50 29			19 44			
	68 Orionis	5.7	6 7 34			19 48			
	18 Moon II. L.	-	6 1 57.53	129.35	64.88	N. 19 32 20.3	+100.5	14 45.33	54 9.27
	Moon II. U.	20.4	6 27 52.84	129.85	65.04	19 45 31.0	+31.0	14 46.12	54 12.20
	74 B. Geminor.	6.2	6 42 59			18 16			
	110 B. Geminor.	6.2	6 58 2			17 52			
	19 Moon II. L.	-	6 53 53.29	130.20	65.15	N. 19 44 41.9	-39.3	14 47.65	54 17.81
	Moon II. U.	21.4	7 19 57.14	130.42	65.22	19 29 46.0	-110.0	14 49.93	54 26.15
	79 Geminorum	6.3	7 40 44			20 30			
	85 Geminorum	5.2	7 51 16			20 5			
	20 Moon II. L.	-	7 46 2.79	130.51	65.25	N. 19 0 43.2	-180.4	14 52.95	54 37.25
	Moon II. U.	22.4	8 12 8.92	130.50	65.25	18 17 40.9	-249.8	14 56.72	54 51.09
	90 B. Cancri	6.3	8 31 54			15 34			
	54 Cancri	6.3	8 46 49			15 38			
	21 Moon II. L.	-	8 38 14.65	130.45	65.23	N. 17 20 53.7	-317.8	15 1.21	55 7.58
	Moon II. U.	23.5	9 4 19.66	130.39	65.20	16 10 43.5	-383.5	15 6.39	55 26.57
	12 B. Leonis	6.3	9 21 21			16 55			
	♚ Leonis	5.6	9 39 37			N. 14 22			

MOON-CULMINATING STARS, 1924. 455

AT TRANSIT AT GREENWICH.

Date.	Name.	Mag.	Apparent Right Ascension.	Var. of C's R.A. in 1 hour of Long.	Sid. Time of Semid. pass Merid.	Apparent Declination.	Var. of C's Dec. in 1 hour of Long.	Semi- diameter.	Hor. Par.
			h m s	s	s	° ' "	"	' "	' "
Oct. 22	Moon II. L.	-	9 30 24.28	130.39	65.18	N. 14 47 39.9	-446.5	15 12.19	55 47.87
	Moon II. U.	24.5	9 56 29.51	130.51	65.18	13 12 21.0	-506.0	15 18.55	56 11.22
23	Moon II. L.	-	10 22 37.10	130.79	65.23	N. 11 25 33.3	-561.2	15 25.38	56 36.26
	Moon II. U.	25.5	10 48 49.50	131.32	65.33	9 28 13.3	-611.2	15 32.55	57 2.59
24	Moon II. L.	-	11 15 9.79	132.12	65.50	N. 7 21 29.1	-655.1	15 39.94	57 29.71
	Moon II. U.	26.6	11 41 41.64	133.25	65.76	5 6 40.6	-691.7	15 47.39	57 57.06
25	Moon II. L.	-	12 8 29.21	134.74	66.11	N. 2 45 21.7	-719.9	15 54.75	58 24.05
	Moon II. U.	27.6	12 35 36.91	136.60	66.56	N. 0 19 21.8	-738.4	16 1.82	58 50.02
26	Moon II. L.	-	13 3 9.35	138.86	67.10	S. 2 9 15.1	-745.8	16 8.44	59 14.31
	Moon II. U.	28.6	13 31 10.97	141.47	67.74	4 38 8.6	-740.9	16 14.42	59 36.26
27	Moon II. L.	-	13 59 45.74	144.38	68.45	S. 7 4 43.8	-722.6	16 19.60	59 55.29
28	Moon I. U.	0.2	14 26 38.36	147.37	69.22	S. 9 26 14.2	-690.0	16 23.84	60 10.85
	Moon I. L.	-	14 56 26.00	150.58	70.01	11 39 45.3	-642.7	16 27.03	60 22.54
29	Moon I. U.	1.3	15 26 51.90	153.72	70.77	S. 13 42 20.4	-580.8	16 29.09	60 30.11
	Moon I. L.	-	15 57 54.09	156.59	71.48	15 31 8.7	-505.1	16 30.00	60 33.44
30	Moon I. U.	2.3	16 29 28.11	158.98	72.07	S. 17 3 33.3	-417.1	16 29.77	60 32.58
	Moon I. L.	-	17 1 26.93	160.69	72.50	18 17 20.8	-319.3	16 28.45	60 27.74
31	Moon I. U.	3.3	17 33 41.24	161.54	72.73	S. 19 10 49.7	-214.6	16 26.14	60 19.27
	Moon I. L.	-	18 6 0.08	161.43	72.74	19 42 56.4	-106.2	16 22.96	60 7.60
Nov. 1	Moon I. U.	4.4	18 38 11.62	160.33	72.51	S. 19 53 18.6	+ 2.2	16 19.04	59 53.22
	Moon I. L.	-	19 10 4.31	158.31	72.05	19 42 15.1	+107.5	16 14.54	59 36.71
2	Moon I. U.	5.4	19 41 27.88	155.50	71.40	S. 19 10 41.3	+206.9	16 9.60	59 18.58
	Moon I. L.	-	20 12 14.05	152.11	70.59	18 20 2.3	-1298.1	16 4.36	58 59.34
σ Capricorni		5.5	20 15 2			19 21			
	o Capricorni	5.6	20 25 34			18 50			
3	Moon I. U.	6.5	20 42 17.02	148.34	69.68	S. 17 12 5.2	-1379.7	15 58.94	58 39.46
	Moon I. L.	-	21 11 33.65	144.42	68.71	15 48 50.3	+451.0	15 53.45	58 19.31
θ Capricorni		4.2	21 1 43			17 32			
	ι Capricorni	4.3	21 18 3			17 9			
4	Moon I. U.	7.5	21 40 3.20	140.53	67.74	S. 14 12 24.2	+511.6	15 47.99	57 59.24
	Moon I. L.	-	22 7 47.03	136.82	66.79	12 24 54.3	+561.7	15 42.60	57 39.49
ι Aquarii		4.4	22 2 22			14 14			
	45 Aquarii	6.1	22 14 58			13 41			
5	Moon I. U.	8.5	22 34 48.09	133.42	65.91	S. 10 28 24.8	+601.6	15 37.36	57 20.25
	Moon I. L.	-	23 1 10.60	130.40	65.10	8 24 53.9	+632.0	15 32.30	57 1.65
78 Aquarii		6.3	22 50 39			7 36			
	φ Aquarii	4.4	23 10 26			6 27			
6	Moon I. U.	9.6	23 26 59.51	127.83	64.41	S. 6 16 14.0	+653.2	15 27.43	56 43.78
	Moon I. L.	-	23 52 20.24	125.71	63.83	4 4 10.6	+666.0	15 22.77	56 26.69
20 Piscium		5.6	23 44 5			3 11			
29 Piscium		5.1	23 57 58			S. 3 27			

456 MOON-CULMINATING STARS, 1924.

AT TRANSIT AT GREENWICH.

Date.	Name.	Mag.	Apparent Right Ascension.	Var. of C's R.A. in 1 hour of Long.	Std. Time of Semid. pass ^W Merid.	Apparent Declination.	Var. of C's Dec. in 1 hour of Long.	Semi- diameter.	Hor. Par.
			h m s	s	s	° ' "	"	' "	' "
Nov. 7	Moon I. U.	10.6	0 17 18.42	124.06	63.37	S. 1 50 22.9	+670.7	15 18.33	56 10.40
	Moon I. L.	-	0 41 59.60	122.88	63.02	N. 0 23 35.3	-667.8	15 14.11	55 54.92
	14 Ceti	5.4	0 31 42			S. 0 55			
	26 Ceti	6.0	0 59 57			N. 0 58			
8	Moon I. U.	11.6	1 6 29.17	122.13	62.80	N. 2 36 14.7	+657.6	15 10.11	55 40.25
	Moon I. L.	-	1 30 52.24	121.78	62.68	4 46 10.3	+640.5	15 6.33	55 26.37
	117 G. Piscium	6.5	1 23 1			3 9			
	2 Piscium	4.7	1 37 32			5 6			
9	Moon I. U.	12.7	1 55 13.39	121.80	62.67	N. 6 52 0.4	+616.7	15 2.78	55 13.31
	Moon I. L.	-	2 19 36.81	122.15	62.75	8 52 26.6	+586.6	14 59.44	55 1.09
	ξ ¹ Ceti	4.5	2 9 1			8 30			
	ξ ² Ceti	4.3	2 24 10			8 7			
10	Moon I. U.	13.7	2 44 5.98	122.75	62.90	N. 10 46 13.6	+550.3	14 56.35	54 49.74
	Moon II. L.	-	3 10 49.98	123.61	63.12	12 32 9.3	+508.1	14 53.51	54 39.32
	147 B. Arietis	5.8	3 2 17			12 54			
	8 B. Tauri	6.2	3 20 2			12 22			
11	Moon II. U.	14.7	3 35 38.96	124.57	63.38	N. 14 9 5.9	+460.4	14 50.95	54 29.91
	λ Tauri	3.3	3 56 32			12 17			
	193 B. Tauri	6.2	4 8 13			17 5			
12	Moon II. L.	-	4 0 40.00	125.61	63.66	N. 15 35 59.7	+407.7	14 48.68	54 21.60
	Moon II. U.	15.8	4 25 53.53	126.64	63.95	16 51 52.9	+350.4	14 46.75	54 14.51
	i Tauri	5.1	4 46 59			18 43			
	m Tauri	5.0	5 3 1			18 33			
13	Moon II. L.	-	4 51 19.18	127.62	64.23	N. 17 55 53.4	+289.1	14 45.19	54 8.79
	Moon II. U.	16.8	5 16 55.82	128.47	64.48	18 47 16.9	+224.3	14 44.04	54 4.56
	120 Tauri	5.6	5 29 8			18 29			
	B.D. +19°11'10"	6.0	5 47 57			19 51			
14	Moon II. L.	-	5 42 41.66	129.14	64.69	N. 19 25 27.1	+157.0	14 43.35	54 2.00
	Moon II. U.	17.8	6 8 34.40	129.61	64.84	19 49 56.8	+87.7	14 43.14	54 1.26
	27 Geminorum	4.1	6 24 30			20 16			
	74 B. Geminor.	6.2	6 43 0			18 17			
15	Moon II. L.	-	6 34 31.42	129.85	64.94	N. 20 0 27.6	+17.3	14 43.48	54 2.49
	Moon II. U.	18.9	7 0 29.98	129.87	64.99	19 56 51.0	-53.4	14 44.39	54 5.85
	56 Geminorum	5.2	7 17 31			20 35			
	f Geminorum	5.3	7 35 8			17 51			
16	Moon II. L.	-	7 26 27.52	129.69	64.98	N. 19 39 7.1	-123.8	14 45.93	54 11.47
	Moon II. U.	19.9	7 52 21.83	129.34	64.92	19 7 25.1	-193.0	14 48.11	54 19.48
	ζ Can. (mean)	4.7	8 7 54			17 52			
	θ Cancri	5.5	8 27 18			18 21			
17	Moon II. L.	-	8 18 11.24	128.88	64.83	N. 18 22 1.5	-260.6	14 50.97	54 29.98
	Moon II. U.	20.9	8 43 54.80	128.38	64.72	17 23 20.3	-325.9	14 54.52	54 43.02
	α ¹ Cancri	5.7	8 53 23			15 52			
	1227 B. Cancri	6.4	9 17 6			N. 15 41			

MOON-CULMINATING STARS, 1924. 457

AT TRANSIT AT GREENWICH.

Date.	Name.	Mag.	Apparent Right Ascension.	Var. of R.A. in 1 hour of Long.	Sid. Time of Semid. pass. of Merid.	Apparent Declination.	Var. of Dec. in 1 hour of Long.	Semi- diameter.	Hor. Par.
Nov. 18	Moon II. L.	-	h m s	s	s	° ' "	"	' "	' "
	Moon II. U.	22.0	9 32.46	127.91	64.62	N. 16 11 51.2	-388.5	14 58.78	54 58.65
	γ Leonis	5.0	9 35 4.97	127.54	64.53	14 48 9.6	-447.9	15 3.74	55 16.85
	34 Leonis	6.4	9 54 10			12 48			
19	Moon II. L.	-	10 34.01	127.34	64.48	N. 13 12 56.4	-503.7	15 9.38	55 37.54
	Moon II. U.	23.0	10 26 2.18	127.40	64.49	11 26 57.5	-555.4	15 15.66	56 0.61
	l Leonis	5.3	10 45 18			10 57			
	χ Leonis	4.7	11 1 7			7 45			
20	Moon II. L.	-	10 51 32.90	127.78	64.58	N. 9 31 4.9	-602.5	15 22.54	56 25.81
	Moon II. U.	24.0	11 17 10.38	128.54	64.76	7 26 17.8	-644.4	15 29.92	56 52.94
21	Moon II. L.	-	11 42 59.46	129.72	65.04	N. 5 13 44.0	-680.2	15 37.72	57 21.56
	Moon II. U.	25.1	12 9 5.61	131.39	65.44	2 54 41.7	-709.0	15 45.80	57 51.23
22	Moon II. L.	-	12 35 34.69	133.55	65.96	N. 0 30 42.1	-729.5	15 54.02	58 21.37
	Moon II. U.	26.1	13 2 32.79	136.22	66.61	S. 1 56 28.4	-740.5	16 2.19	58 51.36
23	Moon II. L.	-	13 30 6.01	139.40	67.38	S. 4 24 46.5	-740.5	16 10.11	59 20.45
	Moon II. U.	27.1	13 58 20.07	143.02	68.25	6 51 50.5	-727.9	16 17.59	59 47.88
24	Moon II. L.	-	14 27 19.87	147.00	69.21	S. 9 15 0.1	-701.2	16 24.38	60 12.81
	Moon II. U.	28.2	14 57 8.96	151.21	70.21	11 31 19.0	-659.3	16 30.28	60 34.47
25	Moon II. L.	-	15 27 48.89	155.44	71.21	S. 13 37 38.7	-601.3	16 35.09	60 52.14
	Moon II. U.	29.2	15 59 18.49	159.44	72.15	15 30 46.4	-527.3	16 38.65	61 5.19
26	Moon I. L.	-	16 29 7.38	162.80	72.98	S. 17 7 35.4	-438.4	16 40.82	61 13.16
27	Moon I. U.	0.8	17 1 58.21	165.51	73.61	S. 18 25 17.8	-336.7	16 41.54	61 15.81
	Moon I. L.	-	17 35 15.37	167.15	74.01	19 21 38.2	-225.4	16 40.81	61 13.11
28	Moon I. U.	1.9	18 8 44.74	167.52	74.11	S. 19 55 5.5	-108.6	16 38.67	61 5.26
	Moon I. L.	-	18 42 10.68	166.57	73.92	20 5 0.9	1.9	16 35.23	60 52.65
29	Moon I. U.	2.9	19 15 17.52	164.36	73.43	S. 19 51 40.0	1.123.3	16 30.66	60 35.86
	Moon I. L.	-	19 47 51.14	161.08	72.69	19 16 8.2	1.230.3	16 25.14	60 15.59
30	Moon I. U.	3.9	20 19 40.14	156.98	71.77	S. 18 20 11.8	1.327.1	16 18.87	59 52.58
	Moon I. L.	-	20 50 36.71	152.39	70.67	17 6 5.2	1.411.8	16 12.06	59 27.59
Dec. 1	Moon I. U.	5.0	21 20 36.56	147.58	69.53	S. 15 36 18.3	1.483.8	16 4.91	59 1.36
	Moon I. L.	-	21 49 38.83	142.82	68.37	13 53 26.0	1.542.8	15 57.61	58 34.55
	45 Capricorni	5.8	21 39 54			15 6			
	4 Aquarii	4.4	22 2 22			14 14			
2	Moon I. U.	6.0	22 17 45.31	138.32	67.26	S. 11 59 59.1	1.589.7	15 50.31	58 7.77
	Moon I. L.	-	22 44 59.99	134.21	66.23	9 58 19.4	1.625.1	15 43.15	57 41.51
	213 B. Aquarii	6.5	22 39 7			8 42			
	78 Aquarii	6.3	22 50 39			7 36			
3	Moon I. U.	7.1	23 11 28.27	130.59	65.29	S. 7 50 37.0	1.650.3	15 36.25	57 16.15
	Moon I. L.	-	23 37 16.37	127.52	64.49	5 38 49.9	1.666.1	15 29.67	56 52.01
	342 B. Aquarii	6.5	23 27 38			4 30			
	20 Piscium	5.6	23 44 5			S. 3 11			

458 MOON-CULMINATING STARS, 1924.

AT TRANSIT AT GREENWICH.

Date.	Name.	Mag.	Apparent Right Ascension.	Var. of C's R.A. in 1 hour of Long.	Sld. Time of Semid. pass [†] Merid.	Apparent Declination.	Var. of C's Dec. in 1 hour of Long.	Semi- diameter.	Hor. Par.
			h m s	s	s	° ' "	"	' "	' "
Dec. 4	Moon I. U.	8.1	0 23 1.05	125.02	63.82	S. 3 24 44.1	+673.6	15 23.48	56 29.31
	Moon I. L.	-	0 27 19.14	123.09	63.29	1 9 55.1	+673.4	15 17.73	56 8.19
	54 B. Ceti	6.3	0 20 39			2 38			
	14 Ceti	5.4	0 31 41			S. 0 55			
5	Moon I. U.	9.1	0 51 47.39	121.71	62.90	N. 1 4 9.6	+666.3	15 12.43	55 48.75
	Moon I. L.	-	1 16 2.24	120.85	62.64	3 16 9.4	+652.6	15 7.60	55 31.02
	33 Ceti	6.1	1 6 42			2 3			
	117 G. Piscium	6.5	1 23 1			3 9			
6	Moon I. U.	10.1	1 40 9.72	120.47	62.51	N. 5 24 48.3	+632.9	15 3.23	55 14.98
	Moon I. L.	-	2 4 15.35	120.53	62.50	7 28 54.2	+607.2	14 59.32	55 0.63
	39 B. Arietis	6.5	2 0 54			7 22			
	ξ ¹ Ceti	4.5	2 9 1			8 30			
7	Moon I. U.	11.2	2 28 24.01	120.97	62.58	N. 9 27 17.1	+575.7	14 55.85	54 47.89
	Moon I. L.	-	2 52 39.90	121.73	62.75	11 18 49.0	+538.7	14 52.80	54 36.70
	μ Ceti	4.4	2 40 53			9 48			
	147 B. Arietis	5.8	3 2 17			12 54			
8	Moon I. U.	12.2	3 17 6.43	122.73	62.99	N. 13 2 23.2	+496.1	14 50.16	54 27.00
	Moon I. L.	-	3 41 46.13	123.91	63.28	14 36 55.0	+448.3	14 47.91	54 18.74
	f Tauri	4.3	3 26 44			12 41			
	30 B. Tauri	6.4	3 33 35			15 11			
9	Moon I. U.	13.2	4 6 40.58	125.18	63.59	N. 16 1 22.4	+395.4	14 46.03	54 11.85
	Moon I. L.	-	4 31 50.35	126.45	63.92	17 14 46.5	+337.9	14 44.52	54 6.30
	75 Tauri	5.2	4 24 9			16 11			
	302 B. Tauri	6.1	4 41 54			18 36			
10	Moon I. U.	14.3	4 57 15.00	127.64	64.22	N. 18 16 14.1	+276.1	14 43.36	54 2.06
	353 B. Tauri	6.5	5 16 31			19 44			
	120 Tauri	5.6	5 29 8			18 29			
11	Moon II. L.	-	5 25 2.10	128.72	64.49	N. 19 4 58.0	+210.7	14 42.56	53 59.13
	Moon II. U.	15.3	5 50 51.81	129.53	64.70	19 40 19.5	+142.5	14 42.13	53 57.54
	68 Orionis	5.7	6 7 35			19 48			
	16 Geminorum	6.2	6 23 29			20 32			
12	Moon II. L.	-	6 16 49.54	130.05	64.85	N. 20 1 49.1	+72.2	14 42.07	53 57.32
	Moon II. U.	16.3	6 42 51.78	130.27	64.94	20 9 8.4	+0.9	14 42.40	53 58.54
	ζ Gem. (var.)	3.7	6 59 40			20 41			
	56 Geminorum	5.2	7 17 32			20 35			
13	Moon II. L.	-	7 8 54.83	130.19	64.94	N. 20 2 10.2	-70.6	14 43.15	54 1.27
	Moon II. U.	17.4	7 34 55.12	129.82	64.87	19 40 58.0	-141.3	14 44.32	54 5.59
	85 Geminorum	5.2	7 51 18			20 5			
	ζ Can. (mean)	4.7	8 7 55			17 52			
14	Moon II. L.	-	8 0 49.45	129.20	64.75	N. 19 5 46.7	-210.3	14 45.97	54 11.62
	Moon II. U.	18.4	8 26 35.32	128.42	64.58	18 17 0.7	-276.9	14 48.11	54 19.46
	54 Cancri	6.3	8 46 51			15 38			
	0 ^a Cancri	5.7	8 53 24			N. 15 52			

MOON-CULMINATING STARS, 1924. 459

AT TRANSIT AT GREENWICH.

Date.	Name.	Mag.	Apparent Right Ascension.	Var. of C's R.A. in 1 hour of Long.	Std. Time of Semid. pass- of Merid.	Apparent Declination.	Var. of C's Dec. in 1 hour of Long.	Semi- diameter.	Hor. Par.
			h m s	s	s	° ' "	"	' "	' "
Dec. 15	Moon II. L.	-	8 52 11.06	127.53	64.39	N. 17 15 12.7	-340.5	14 50.76	54 29.21
	Moon II. U.	19.4	9 17 36.03	126.64	64.19	16 1 2 6	-400.5	14 53.96	54 40.97
	11 Leonis	6.5	9 33 56			14 41			
	γ Leonis	5.0	9 54 11			12 48			
16	Moon II. L.	-	9 42 50.63	125.82	64.01	N. 14 35 15.5	-456.6	14 57.74	54 54.82
	Moon II. U.	20.4	10 7 56.36	125.17	63.87	12 58 41.4	-508.3	15 2.10	55 10.82
	45 Leonis	5.8	10 23 41			10 9			
	l Leonis	5.3	10 45 18			10 57			
17	Moon II. L.	-	10 32 55.75	124.78	63.78	N. 11 12 13.7	-555.5	15 7.05	55 29.01
	Moon II. U.	21.5	10 57 52.32	124.71	63.79	9 16 49.2	-597.7	15 12.60	55 49.37
	σ Leonis	4.1	11 17 15			6 26			
	451 B. Leonis	7.0	11 38 34			2 47			
18	Moon II. L.	-	11 22 50.49	125.05	63.89	N. 7 13 28.9	-634.7	15 18.72	56 11.84
	Moon II. U.	22.5	11 47 55.46	125.86	64.10	5 3 18.2	-666.1	15 25.39	56 36.29
	10 Virginis	6.2	12 5 50			2 19			
	190 B. Virginis	7.4	12 26 44			3 56			
19	Moon II. L.	-	12 13 13.13	127.18	64.44	N. 2 47 28.9	-691.1	15 32.54	57 2.54
	Moon II. U.	23.6	12 38 49.97	129.06	64.92	N. 0 27 21.0	-709.0	15 40.10	57 30.30
	48 Virginis	6.5	13 0 1			S. 3 15			
	65 Virginis	6.0	13 19 24			4 32			
20	Moon II. L.	-	13 4 52.87	131.53	65.55	S. 1 55 35.2	-718.9	15 47.97	57 59.19
	Moon II. U.	24.6	13 31 28.97	134.59	66.31	4 19 36.4	-719.6	15 56.02	58 28.74
21	Moon II. L.	-	13 58 45.29	138.23	67.20	S. 6 42 43.6	-709.7	16 4.10	58 58.38
	Moon II. U.	25.6	14 26 48.49	142.39	68.21	9 2 40.9	-687.7	16 12.02	59 27.43
22	Moon II. L.	-	14 55 44.23	146.96	69.31	S. 11 16 54.2	-652.1	16 19.57	59 55.15
	Moon II. U.	26.7	15 25 36.61	151.79	70.46	13 22 32.2	-601.6	16 26.53	60 20.69
23	Moon II. L.	-	15 56 27.35	156.65	71.59	S. 15 16 31.0	-535.5	16 32.67	60 43.24
	Moon II. U.	27.7	16 28 15.01	161.23	72.65	16 55 41.6	-453.6	16 37.77	61 1.97
24	Moon II. L.	-	17 0 54.29	165.19	73.56	S. 18 16 59.6	-357.0	16 41.64	61 16.15
	Moon II. U.	28.8	17 34 15.67	168.18	74.24	19 17 41.3	-248.1	16 44.10	61 25.19
25	Moon II. L.	-	18 8 5.73	169.92	74.64	S. 19 55 38.4	-130.3	16 45.05	61 28.68
26	Moon I. U.	0.4	18 30 38.54	170.21	74.71	S. 20 9 31.7	- 8.3	16 44.44	61 26.44
	Moon I. L.	-	19 13 35.52	169.03	74.44	19 59 0.7	+112.9	16 42.29	61 18.56
27	Moon I. U.	1.4	19 47 9.77	166.46	73.87	S. 19 24 45.4	+228.3	16 38.70	61 5.35
	Moon I. L.	-	20 20 5.97	162.74	73.01	18 28 20.4	+333.9	16 33.79	60 47.36
28	Moon I. U.	2.4	20 52 12.17	158.19	71.96	S. 17 12 3.2	+426.6	16 27.78	60 25.29
	Moon I. L.	-	21 23 20.63	153.17	70.80	15 38 38.7	+504.9	16 20.87	59 59.94
29	Moon I. U.	3.5	21 53 27.75	148.02	69.58	S. 13 51 4.4	+568.3	16 13.30	59 32.16
	Moon I. L.	-	22 22 33.53	142.99	68.38	S. 11 52 17.7	+617.1	16 5.31	59 2.82

460 MOON-CULMINATING STARS, 1924.

AT TRANSIT AT GREENWICH.

Date.	Name.	Mag.	Apparent Right Ascension.	Var. of G's R.A. in 1 hour of Long.	Sid. Time of Semid. passg Merid.	Apparent Declination.	Var. of G's Dec. in 1 hour of Long.	Semidiameter.	Hor. Par.
			h m s	s	s	° ' "	"	' "	' "
Dec. 30	Moon I. U.	4.5	22 50 40.85	138.30	67.23	S. 9 45 7.1	+652.5	15 57.10	58 32.68
	Moon I. L.	-	23 17 54.62	134.09	66.19	7 32 6.1	+675.8	15 48.87	58 2.49
	φ Aquarii	4.4	23 10 25			6 27			
	337 B. Aquarii	6.4	23 25 38			4 57			
31	Moon I. U.	5.6	23 44 21.10	130.43	65.27	S. 5 15 31.9	+688.3	15 40.80	57 32.87
	Moon I. L.	-	0 10 7.30	127.38	64.49	2 57 24.6	+691.5	15 33.02	57 4.32
	4 Ceti	6.3	0 3 53			2 58			
	54 B. Ceti	6.3	0 20 39			S. 2 38			

Note.—The Mean Places of Moon-Culminating Stars are given in the section headed “ Mean Places of Occultation Stars ” on pages 470-474, with the exception of six stars whose positions are given below :—

Name of Star.	Magni- tude.	Right Ascension for 1924.0	Annual Proper Motion.	Declination for 1924.0	Annual Proper Motion.
		h m s	s	° ' "	"
λ Ceti	4.7	2 55 38.330	0.0000	1. 8 36 20.41	-0.002
λ Tauri	3.3	3 56 28.057	+0.0002	+12 16 36.22	-0.011
451 B. Leonis	7.0	11 38 31.684	-0.0068	+ 2 47 2.92	-0.053
190 B. Virginis	7.4	12 26 41.953	-0.0003	+ 3 55 41.60	-0.015
8 B. Libræ	6.9	14 34 55.154	+0.0001	-10 13 37.75	+0.019
158 G. Ophiuchi	6.7	17 34 10.853	-0.0009	-21 52 8.62	-0.025

In the year 1924 there will be five eclipses, three of the Sun and two of the Moon.

1.—*A Total Eclipse of the Moon*, February 20, 1924, partly visible at Greenwich ; the beginning visible generally in the extreme northwestern part of North America, the Pacific Ocean, Australia, Asia, and the Indian Ocean ; the ending visible generally in the western part of the Pacific Ocean, Asia, Australia, the Indian Ocean, Europe, and Africa except the extreme northwestern part.

ELEMENTS OF THE ECLIPSE.

Greenwich Mean Time of φ in Right Ascension, February 20^d 4^h 12^m 25^s.7.

Sun's Right Ascension	-	-	-	-	-	-	-	-	22 11 18.18
Hourly Motion	-	-	-	-	-	-	-	-	9.61
Moon's Right Ascension	-	-	-	-	-	-	-	-	10 11 18.18
Hourly Motion	-	-	-	-	-	-	-	-	133.55
Sun's Declination	-	-	-	-	-	-	-	-	- 11 12 13.7
Hourly Motion	-	-	-	-	-	-	-	-	+ 0 53.5
Moon's Declination	-	-	-	-	-	-	-	-	+ 11 4 12.1
Hourly Motion	-	-	-	-	-	-	-	-	- 9 3.2
Sun's Equatorial Horizontal Parallax				-	-	-	-	-	8.9
Sun's True Semidiameter	-	-	-	-	-	-	-	-	16 10.4
Moon's Equatorial Horizontal Parallax				-	-	-	-	-	57 50.9
Moon's True Semidiameter	-	-		-	-	-	-	-	15 45.0

CIRCUMSTANCES OF THE ECLIPSE.

				d	h	m	
Moon enters Penumbra	-	-	February	20	1	14·9	} Greenwich Mean Time.
Moon enters Umbra	-	-	„	20	2	18·3	
Total Eclipse begins	-	-	„	20	3	19·6	
Middle of the Eclipse	-	-	„	20	4	8·5	
Total Eclipse ends	-	-	„	20	4	57·4	
Moon leaves Umbra	-	-	„	20	5	58·5	
Moon leaves Penumbra	-	-	„	20	7	1·5	

Contacts of Umbra with Moon's Limb.	Angles of Position from the North Point.	The Moon being in the Zenith	
		in Longitude from Greenwich.	and in Latitude.
First	97° to E.	147° 56' E.	11° 21' N.
Last	67 to W.	94 47 E.	10 48 N.

Magnitude of the Eclipse = 1.605 (Moon's diameter = 1.0).

II.—A Partial Eclipse of the Sun, March 5, 1924, invisible at Greenwich.

ELEMENTS OF THE ECLIPSE.

Greenwich Mean Time of ϕ in Right Ascension, March 5^d 3^h 1^m 28^s.1.

								^h	^m	^s
Sun and Moon's Right Ascension	-	-	-	-	-	-	-	23	3	57 ^{.23}
Hourly Motions	-	-	-	-	-	-	-	98 ^{.29}	and	124 ^{.87}
Sun's Declination	-	-	-	-	-	-	-	—	°	' 5' 59'
Hourly Motion -	-	-	-	-	-	-	-	-	+	0 58.0
Moon's Declination	-	-	-	-	-	-	-	—	7	11 50.4
Hourly Motion -	-	-	-	-	-	-	-	-	+	9 48.1
Sun's Equatorial Horizontal Parallax	-	-	-	-	-	-	-			8.9
Sun's True Semidiameter	-	-	-	-	-	-	-		16	7.1
Moon's Equatorial Horizontal Parallax	-	-	-	-	-	-	-		56	32.2
Moon's True Semidiameter	-	-	-	-	-	-	-		15	23.6

CIRCUMSTANCES OF THE ECLIPSE.

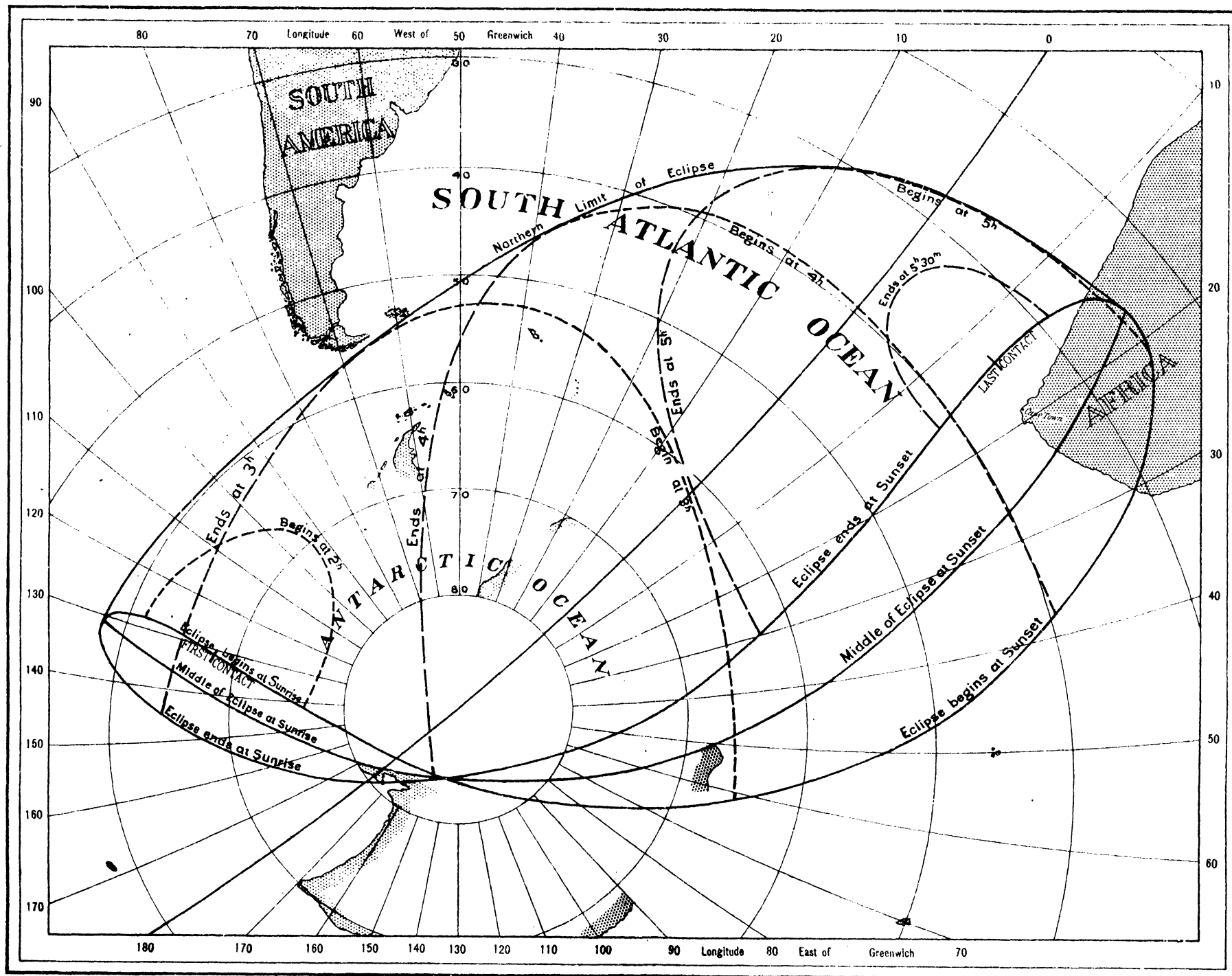
			Greenwich Mean Time.			Longitude from Greenwich.		Latitude.
			d	h	m			
Eclipse begins	-	-	March	5	1	55.4	131 14 W.	68 14 S.
Greatest Eclipse	-	-	„	5	3	43.9	55 47 E.	72 2 S.
Eclipse ends	-	-	„	5	5	32.8	13 50 E.	34 36 S.

Magnitude of Greatest Eclipse=0.582 (Sun's diameter=1.0).

At CAPE OF GOOD HOPE, a Partial Eclipse is partly visible, Magnitude 0.19.

					d	h	m	
Begins	-	-	-	March	5	4	20	} Greenwich Mean Time.
Greatest Phase	-	-	„		5	4	57	
Angle from North Point of First Contact	-	-	-	-	-	-	-	196°.
Angle from Vertex of First Contact	-	-	-	-	-	-	-	73°.

PARTIAL ECLIPSE OF MARCH 5, 1924.



W 7.8. W² 31279. 63/23. 14000. 8. 21. J. W. LTD

Note:- The hours of beginning and ending are expressed in Greenwich Mean Time.

ECLIPSES, 1924.

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BESSELIAN ELEMENTS OF THE PARTIAL ECLIPSE OF THE SUN, MARCH 5, 1924.

Greenwich Mean Time.	Co-ordinates of Centre of Shadow on Fundamental Plane.		Direction of Axis of Shadow.			Radius of Penumbra on Fundamental Plane.
	x	y	Log. sin d	Log. cos d	μ	l_1
h m						
1 50	-0.60565	-1.46561	-9.01997	+9.99761	24° 35' 2"	+0.55863
2 0	-0.52091	-1.43962	-9.01978	+9.99761	27 5.2	+0.55865
10	0.43616	1.41362	9.01959	9.99761	29 35.3	0.55868
20	0.35141	1.38762	9.01940	9.99761	32 5.3	0.55870
30	0.26667	1.36161	9.01921	9.99761	34 35.3	0.55873
40	0.18193	1.33559	9.01902	9.99762	37 5.4	0.55875
50	0.09719	1.30958	9.01883	9.99762	39 35.4	0.55877
3 0	-0.01245	-1.28355	-9.01864	+9.99762	42 5.4	+0.55879
10	+0.07229	1.25753	9.01846	9.99762	44 35.5	0.55881
20	0.15703	1.23149	9.01827	9.99762	47 5.5	0.55883
30	0.24176	1.20546	9.01808	9.99763	49 35.5	0.55885
40	0.32649	1.17942	9.01789	9.99763	52 5.6	0.55887
50	0.41122	1.15337	9.01770	9.99763	54 35.6	0.55889
4 0	+0.49595	-1.12732	-9.01751	+9.99763	57 5.7	+0.55891
10	0.58068	1.10127	9.01732	9.99763	59 35.7	0.55893
20	0.66540	1.07521	9.01713	9.99764	62 5.7	0.55895
30	0.75012	1.04915	9.01694	9.99764	64 35.8	0.55896
40	0.83484	1.02308	9.01675	9.99764	67 5.8	0.55898
50	0.91955	0.99701	9.01656	9.99764	69 35.8	0.55899
5 0	+1.00426	-0.97094	-9.01637	+9.99765	72 5.9	+0.55901
10	1.08897	0.94486	9.01618	9.99765	74 35.9	0.55902
20	1.17367	0.91878	9.01599	9.99765	77 5.9	0.55903
30	1.25837	0.89269	9.01580	9.99765	79 36.0	0.55905
40	+1.34307	-0.86660	-9.01561	+9.99765	82 6.0	+0.55906

Greenwich Mean Time.	Log x' for 1 Minute.	Log y' for 1 Minute.	Log μ' for 1 Minute.	Log. Tangent of Angle of Cone.
				Penumbra.
h m				
1 0	+7.9281	+7.4144	+1.1762	+7.67329
2 0	7.9281	7.4149	1.1762	7.67329
3 0	7.9281	7.4154	1.1762	7.67328
4 0	7.9280	7.4158	1.1762	7.67328
5 0	7.9279	7.4162	1.1762	7.67328
6 0	+7.9278	+7.4166	+1.1762	+7.67327

III.—*A Partial Eclipse of the Sun, July 31, 1924, invisible at Greenwich.*

ELEMENTS OF THE ECLIPSE.

Greenwich Mean Time of \odot in Right Ascension, July 31^d 8^h 25^m 40^s.0.

Sun and Moon's Right Ascension	-	-	-	-	-	-	-	-	^h 8 ^m 42 ^s 54.36
Hourly Motions	-	-	-	-	-	-	-	-	9 ^s .73 and 128 ^s .41
Sun's Declination	-	-	-	-	-	-	-	-	+ 18° 11' 40".8
Hourly Motion -	-	-	-	-	-	-	-	-	— 0 37.3
Moon's Declination	-	-	-	-	-	-	-	-	+ 16 50 39.7
Hourly Motion -	-	-	-	-	-	-	-	-	— 5 23.4
Sun's Equatorial Horizontal Parallax	-	-	-	-	-	-	-	-	8.7
Sun's True Semidiameter	-	-	-	-	-	-	-	-	15 45.5
Moon's Equatorial Horizontal Parallax	-	-	-	-	-	-	-	-	55 24.3
Moon's True Semidiameter	-	-	-	-	-	-	-	-	15 5.1

CIRCUMSTANCES OF THE ECLIPSE.

		Greenwich Mean Time.	Longitude from Greenwich.	Latitude.
		^d ^h ^m		
Eclipse begins -	-	July 31 6 51.7	163° 53' W.	54° 32' S.
Greatest Eclipse -	-	„ 31 7 57.9	145 53 W.	69 35 S.
Eclipse ends -	-	„ 31 9 3.7	100 4 W.	68 18 S.

Magnitude of Greatest Eclipse=0.191 (Sun's diameter=1.0).

ECLIPSES, 1924.

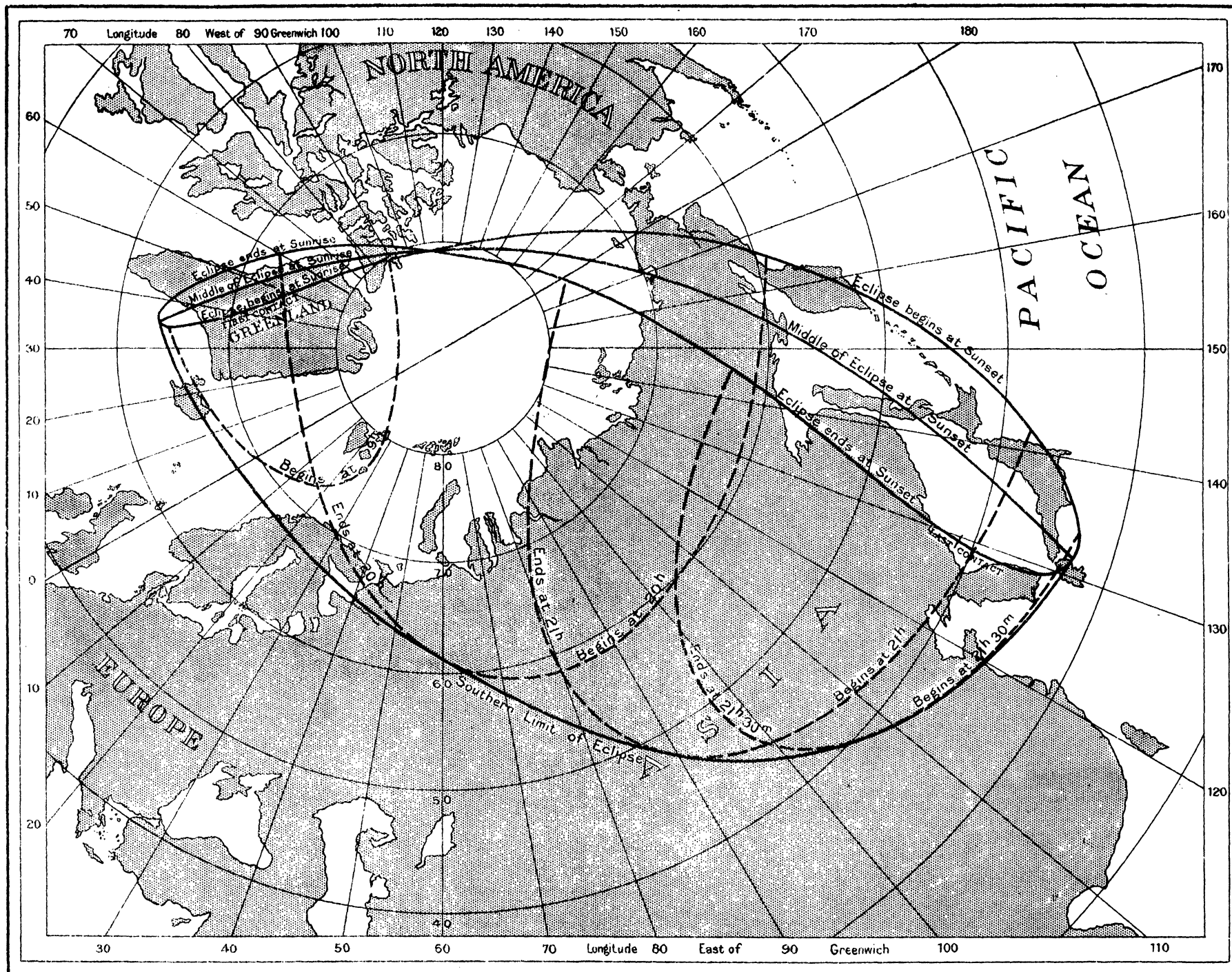
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BESSELIAN ELEMENTS OF THE PARTIAL ECLIPSE OF THE SUN, JULY 31, 1924.

Greenwich Mean Time.	Co-ordinates of Centre of Shadow on Fundamental Plane.		Direction of Axis of Shadow.			Radius of Penumbra on Fundamental Plane.
	x	y	Log. sin d	Log. cos d	μ	l_1
h m 6 50	-0.81943	-1.32941	+9.49495	+9.97767	100° 56.8	+0.55822
7 0	-0.73378	-1.34368	+9.49491	+9.97768	103 26.8	+0.55821
10	0.64812	1.35795	9.49487	9.97768	105 56.9	0.55820
20	0.56247	1.37223	9.49483	9.97769	108 26.9	0.55819
30	0.47681	1.38651	9.49480	9.97769	110 56.9	0.55817
40	0.39116	1.40080	9.49476	9.97770	113 26.9	0.55816
50	0.30550	1.41508	9.49472	9.97770	115 56.9	0.55814
8 0	-0.21984	-1.42937	+9.49468	+9.97770	118 27.0	+0.55813
10	0.13419	1.44367	9.49464	9.97771	120 57.0	0.55811
20	-0.04853	1.45796	9.49460	9.97771	123 27.0	0.55809
30	+0.03712	1.47226	9.49456	9.97772	125 57.0	0.55807
40	0.12278	1.48656	9.49452	9.97772	128 27.0	0.55806
50	0.20843	1.50086	9.49448	9.97773	130 57.0	0.55804
9 0	+0.29408	-1.51517	+9.49444	+9.97773	133 27.1	+0.55802
10	+0.37973	-1.52947	+9.49441	+9.97773	135 57.1	+0.55800

Greenwich Mean Time.	Log. x' for 1 Minute.	Log. y' for 1 Minute.	Log. μ' for 1 Minute.	Log. Tangent of Angle of Cone.
				Penumbra.
h m 6 0	+7.9327	-7.1537	+1.1761	+7.66344
7 0	7.9327	7.1545	1.1761	7.66344
8 0	7.9328	7.1551	1.1761	7.66345
9 0	7.9327	7.1555	1.1761	7.66345
10 0	+7.9327	-7.1559	+1.1761	+7.66345

PARTIAL ECLIPSE OF AUGUST 29, 1924.



W 7 6 Wt 31279. 63/23 14,000. 6. 12 J. W. L. T. P.

Note - The hours of beginning and ending are expressed in Greenwich Mean Time.

V.—*A Partial Eclipse of the Sun*, August 29, 1924, invisible at Greenwich.

ELEMENTS OF THE ECLIPSE.

Greenwich Mean Time of \odot in Right Ascension, August 29 ^d 19 ^h 39 ^m 48 ^s .8									
Sun and Moon's R.A.	-	-	-	-	-	-	-	10 ^h 33 ^m 31 ^s .08	
Hourly Motions	-	-	-	-	-	-	-	9 ^s .10 and 127 ^s .93	
Sun's Declination	-	-	-	-	-	-	-	+ 9° 4' 45".9	
Hourly Motion	-	-	-	-	-	-	-	- 0 53.7	
Moon's Declination	-	-	-	-	-	-	-	+ 10 22 15.0	
Hourly Motion	-	-	-	-	-	-	-	- 9 22.2	
Sun's Equatorial Horizontal Parallax	-	-	-	-	-	-	-	8.7	
Sun's True Semidiameter	-	-	-	-	-	-	-	15 50.6	
Moon's Equatorial Horizontal Parallax	-	-	-	-	-	-	-	56 50.6	
Moon's True Semidiameter	-	-	-	-	-	-	-	15 28.6	

CIRCUMSTANCES OF THE ECLIPSE.

	Greenwich Mean Time.			Longitude from Greenwich.	Latitude.
Eclipse begins	-	-	Aug. 29 18 50.4	41° 35' W.	71° 49' N.
Greatest Eclipse-	-	„	29 20 22.5	173 5 E.	71 32 N.
Eclipse ends	-	„	29 21 55.0	129 23 E.	41 5 N.

Magnitude of Greatest Eclipse=0.426 (Sun's diameter=1.0).

BESSELIAN ELEMENTS OF THE PARTIAL ECLIPSE OF THE SUN,
AUGUST 29, 1924.

Greenwich Mean Time.	Co-ordinates of Centre of Shadow on Fundamental Plane.		Direction of Axis of Shadow.			Radius of Penumbra on Fundamental Plane.
	x	y	Log. sin d .	Log. cos d .	μ	l_1
h m						
18 50	-0.42791	+1.49104	+9.19853	+9.99451	282° 20.3	+0.55244
19 0	-0.34201	+1.46607	+9.19842	+9.99452	284 50.3	+0.55243
10	0.25611	1.44109	9.19830	9.99452	287 20.4	0.55241
20	0.17021	1.41610	9.19819	9.99452	289 50.4	0.55240
30	-0.08430	1.39111	9.19807	9.99452	292 20.5	0.55238
40	+0.00160	1.36610	9.19796	9.99453	294 50.5	0.55237
50	0.08751	1.34109	9.19784	9.99453	297 20.6	0.55235
20 0	+0.17341	+1.31608	+9.19773	+9.99453	299 50.6	+0.55233
10	0.25932	1.29106	9.19761	9.99454	302 20.7	0.55231
20	0.34522	1.26603	9.19750	9.99454	304 50.7	0.55229
30	0.43113	1.24099	9.19738	9.99454	307 20.7	0.55227
40	0.51703	1.21594	9.19727	9.99455	309 50.8	0.55225
50	0.60293	1.19089	9.19715	9.99455	312 20.8	0.55223
21 0	+0.68883	+1.16583	+9.19704	+9.99455	314 50.9	+0.55221
10	0.77473	1.14077	9.19692	9.99456	317 20.9	0.55219
20	0.86063	1.11569	9.19681	9.99456	319 51.0	0.55217
30	0.94652	1.09061	9.19669	9.99456	322 21.0	0.55215
40	1.03241	1.06552	9.19658	9.99456	324 51.1	0.55212
50	1.11830	1.04043	9.19646	9.99457	327 21.1	0.55210
22 0	+1.20419	+1.01533	+9.19634	+9.99457	329 51.1	+0.55207

Greenwich Mean Time.	Log. x' for 1 Minute.	Log. y' for 1 Minute.	Log. μ' for 1 Minute.	Log. Tangent of Angle of Cone.
				Penumbra.
h m				
18 0	+7.9339	-7.3968	+1.1762	+7.66578
19 0	7.9340	7.3975	1.1762	7.66578
20 0	7.9340	7.3983	1.1762	7.66579
21 0	7.9340	7.3991	1.1762	7.66579
22 0	+7.9339	-7.3998	+1.1762	+7.66579

TRANSIT OF MERCURY, 1924. 469

A Transit of Mercury over the Sun's Disk, May 7, 1924, partly visible at Greenwich.

The ingress visible generally in the western part of the Atlantic Ocean, North America, the northern and western parts of South America, the Pacific Ocean, eastern Asia, and eastern Australia; the egress visible generally in the extreme northwestern part of North America, the central and western parts of the Pacific Ocean, Asia, Australia, the Indian Ocean, Europe, and Africa except the extreme northwestern part.

ELEMENTS OF THE TRANSIT.

Greenwich Mean Time of \odot in Right Ascension, May 7^d 13^h 30^m 47^s.0

Sun and Mercury's Right Ascension	-	-	-	-	-	-	-	-	2 ^h 58 ^m 51 ^s .35
Hourly Motions	-	-	-	-	-	-	-	-	+9 ^s .70 and -5 ^s .28
Sun's Declination	-	-	-	-	-	-	-	-	+16° 58' 9".4
Hourly Motion	-	-	-	-	-	-	-	-	+0 41.0
Mercury's Declination	-	-	-	-	-	-	-	-	+16 59 44.4
Hourly Motion	-	-	-	-	-	-	-	-	-1 7.7
Sun's Equatorial Horizontal Parallax	-	-	-	-	-	-	-	-	8.72
Sun's True Semidiameter	-	-	-	-	-	-	-	-	15 50.52
Mercury's Equatorial Horizontal Parallax	-	-	-	-	-	-	-	-	15.78
Mercury's True Semidiameter	-	-	-	-	-	-	-	-	5.99

GREENWICH MEAN TIME OF THE GEOCENTRIC PHASES.

					d	h	m	s
Ingress, exterior contact	-	-	-	-	May 7	9	44	4.4
Ingress, interior contact	-	-	-	-	7	9	47	3.9
Least distance of centers, 1' 24".8	-	-	-	-	7	13	41	27.7
Egress, interior contact	-	-	-	-	7	17	35	41.2
Egress, exterior contact	-	-	-	-	7	17	38	40.9

CIRCUMSTANCES OF THE TRANSIT.

	Angles of Position from the North Point.	Mercury being in the Zenith in Longitude from Greenwich.	and in Latitude.
Ingress, exterior contact	- 58° 5' to E.	146° 40' W.	17° 4' N.
Ingress, interior contact	- 58 1 to E.	147 25 W.	17 4 N.
Least distance of centers	-	153 44 E.	17 0 N.
Egress, interior contact	- 111 41 to W.	94 56 E.	16 55 N.
Egress, exterior contact	- 111 44 to W.	94 11 E.	16 55 N.

The Greenwich Mean Times of the four contacts for any point on the surface of the Earth may be computed from the four following formulæ, respectively, in which ρ denotes the radius of the earth at that point, ϕ' the geocentric latitude, and λ the longitude west from Greenwich. The numbers in brackets are the logarithms of seconds of time.

	h	m	s
For first external contact, T =	9	44	4.4 - [1.7264] $\rho \sin \phi' - [1.9612] \rho \cos \phi' \cos (45^\circ 58' 1 - \lambda)$
For first internal contact, T =	9	47	3.9 - [1.7272] $\rho \sin \phi' - [1.9610] \rho \cos \phi' \cos (46^\circ 41' 9 - \lambda)$
For last internal contact, T =	17	35	41.2 - [1.5764] $\rho \sin \phi' + [1.9961] \rho \cos \phi' \cos (348^\circ 47' 3 - \lambda)$
For last external contact, T =	17	38	40.9 - [1.5776] $\rho \sin \phi' + [1.9958] \rho \cos \phi' \cos (349^\circ 31' 4 - \lambda)$

470 MEAN PLACES OF OCCULTATION STARS, 1924.

Name of Star.			Magni- tude.	Right Ascension for 1924.0.			Annual Proper Motion.	Declination for 1924.0.			Annual Proper Motion.
				h	m	s	s	°	'	"	
4	Ceti	.	6.3	0	3	50.500	+0.0018	- 2	58	17.97	+0.009
5	Ceti	.	6.3	0	4	18.592	+0.0003	2	52	13.08	+0.014
54 B.	Ceti	.	6.3	0	20	36.625	-0.0024	2	38	22.10	-0.051
10	Ceti	.	6.4	0	22	43.562	+0.0056	0	28	12.62	+0.011
14	Ceti	.	5.4	0	31	38.693	+0.0098	- 0	55	22.63	-0.059
26	Ceti	.	6.0	0	59	54.279	+0.0081	+ 0	57	35.51	-0.037
33	Ceti	.	6.1	1	6	38.788	-0.0010	2	2	29.84	-0.006
f	Piscium	.	5.3	1	13	52.639	-0.0033	3	12	52.60	-0.025
117 G.	Piscium	.	6.5	1	22	57.749	..	3	8	30.21	..
μ	Piscium	.	5.0	1	26	12.072	+0.0199	5	45	10.38	-0.027
ν	Piscium	.	4.7	1	37	28.459	-0.0015	+ 5	6	12.84	+0.003
39 B.	Arietis	.	6.5	2	0	50.386	+0.0025	7	22	17.30	-0.032
64	Ceti	.	5.8	2	7	20.203	-0.0092	8	12	53.19	-0.107
ξ ¹	Ceti	.	4.5	2	8	58.153	-0.0012	8	29	26.72	-0.016
ξ	Arietis	.	5.5	2	20	44.405	+0.0006	10	16	1.40	-0.022
25	Arietis	.	6.5	2	23	20.698	-0.0195	+ 9	51	42.44	-0.200
ξ ^a	Ceti	.	4.3	2	24	6.927	+0.0025	8	7	12.69	-0.007
389 B.	Ceti	.	6.3	2	25	31.692	-0.0003	9	13	37.40	-0.003
85	Ceti	.	6.3	2	38	23.202	-0.0026	10	25	7.07	-0.012
μ	Ceti	.	4.4	2	40	49.834	+0.0188	9	47	39.15	-0.025
147 B.	Arietis	.	5.8	3	2	13.239	+0.0016	+12	53	41.86	-0.072
8 B.	Tauri	.	6.2	3	19	59.001	..	12	21	39.98	..
f	Tauri	.	4.3	3	26	40.472	+0.0016	12	40	38.24	+0.002
30 B.	Tauri	.	6.4	3	33	31.693	+0.0015	15	10	56.28	-0.003
179 B.	Tauri	.	5.9	4	3	23.780	+0.0104	14	57	37.12	-0.044
193 B.	Tauri	.	6.2	4	8	9.496	+0.0005	+17	4	59.29	-0.014
48	Tauri	.	6.3	4	11	27.278	+0.0085	15	12	42.13	-0.024
γ	Tauri	.	3.9	4	15	27.963	+0.0083	15	26	43.05	-0.026
58	Tauri	.	5.4	4	16	17.535	+0.0071	14	54	52.20	-0.017
δ	Tauri	.	3.9	4	18	32.958	+0.0075	17	21	55.71	-0.030
63	Tauri	.	5.7	4	19	3.262	+0.0074	+16	36	3.87	-0.027
64	Tauri	.	4.9	4	19	42.767	+0.0084	17	16	8.94	-0.040
68	Tauri	.	4.3	4	21	5.379	+0.0078	17	45	18.94	-0.031
70	Tauri	.	6.4	4	21	16.849	+0.0073	15	46	6.59	-0.026
71	Tauri	.	4.6	4	22	0.761	+0.0075	15	26	49.25	-0.020
75	Tauri	.	5.2	4	24	5.549	+0.0002	+16	11	27.21	+0.020
θ ¹	Tauri	.	4.2	4	24	13.811	+0.0071	15	47	41.10	-0.023
θ ^a	Tauri	.	3.6	4	24	19.270	+0.0078	15	42	13.03	-0.020
80	Tauri	.	5.8	4	25	48.386	+0.0059	15	28	23.98	-0.011
264 B.	Tauri	.	4.8	4	26	12.534	+0.0084	16	1	47.56	-0.026
81	Tauri	.	5.5	4	26	18.629	+0.0069	+15	31	39.71	-0.032
85	Tauri	.	6.0	4	27	31.162	+0.0070	15	41	23.45	-0.020
119 H ¹ .	Tauri	.	6.2	4	29	8.915	+0.0025	17	51	26.68	-0.031
275 B.	Tauri	.	6.5	4	29	17.026	+0.0010	16	9	53.95	+0.019
α	Tauri (Aldebaran)	.	1.1	4	31	33.442	+0.0047	16	21	27.91	-0.189
89	Tauri	.	5.8	4	33	48.317	+0.0072	+15	52	56.09	-0.023
σ ¹	Tauri	.	5.2	4	34	48.654	+0.0019	15	39	5.54	-0.065
σ ^a	Tauri	.	4.9	4	34	55.552	+0.0062	15	46	7.05	-0.019
302 B.	Tauri	.	6.1	4	41	50.451	+0.0053	+18	35	54.74	-0.067

MEAN PLACES OF OCCULTATION STARS, 1924. 471

Name of Star.		Magni- tude.	Right Ascension for 1924.0.			Annual Proper Motion.	Declination for 1924.0.	Annual Proper Motion.
			h	m	s	s		
i	Tauri . . .	5.1	4 46	55.567		+0.0059	+18 42' 42" 47	-0.035
318 B.	Tauri . . .	5.7	4 52	58.841		-0.0008	17 2 8.60	-0.011
m	Tauri . . .	5.0	5 2	57.394		+0.0380	18 32 39.97	+0.025
353 B.	Tauri . . .	6.5	5 16	27.266		+0.0025	19 44 19.34	-0.024
111	Tauri . . .	5.1	5 19	59.240		+0.0168	17 18 51.01	-0.010
115	Tauri . . .	5.3	5 22	44.068		+0.0016	+17 53 53.95	-0.021
117	Tauri . . .	6.0	5 23	36.873		+0.0017	17 10 36.31	-0.078
119	Tauri . . .	4.9	5 27	45.390		+0.0007	18 32 20.58	-0.004
120	Tauri . . .	5.6	5 29	4.376		+0.0011	18 29 14.62	+0.001
130	Tauri . . .	5.6	5 43	0.319		+0.0004	17 42 6.90	-0.009
	B. D. +19°11'10 .	6.0	5 47	53.205		-0.0008	+19 50 57.74	-0.031
χ ¹	Orionis . . .	4.5	5 49	52.925		-0.0126	20 15 48.31	-0.085
57	Orionis . . .	5.8	5 50	26.708		+0.0003	19 44 9.81	-0.013
64	Orionis . . .	5.1	5 58	57.459		+0.0014	19 41 35.21	-0.021
χ ²	Orionis . . .	4.7	5 59	24.401		+0.0011	20 8 29.73	-0.003
68	Orionis . . .	5.7	6 7	31.303		+0.0012	+19 48 31.71	-0.013
19 B.	Geminorum . . .	6.2	6 9	5.411		+0.0027	18 42 5.00	-0.042
124 H ¹ .	Orionis . . .	5.7	6 10	2.291		+0.0010	17 55 44.03	-0.045
71	Orionis . . .	5.1	6 10	22.599		-0.0062	19 11 0.64	-0.194
292 B.	Orionis . . .	6.5	6 16	59.765		+0.0006	17 48 1.38	..
15	Geminorum . . .	6.5	6 23	14.868		-0.0015	+20 50 14.25	-0.054
16	Geminorum . . .	6.2	6 23	25.513		-0.0019	20 32 35.18	-0.005
ν	Geminorum . . .	4.1	6 24	27.045		-0.0005	20 15 41.83	-0.016
74 B.	Geminorum . . .	6.2	6 42	57.036		+0.0002	18 16 37.23	-0.056
110 B.	Geminorum . . .	6.2	6 58	0.318		..	17 51 52.26	..
ζ	Geminorum (var.) . . .	3.7	6 59	36.170		-0.0002	+20 40 59.04	-0.007
56	Geminorum . . .	5.2	7 17	27.865		-0.0044	20 35 18.29	-0.025
61	Geminorum . . .	5.8	7 22	27.645		-0.0002	20 24 38.03	-0.023
162 B.	Geminorum . . .	5.7	7 27	25.534		+0.0018	17 14 57.60	-0.064
f	Geminorum . . .	5.3	7 35	5.337		-0.0002	17 50 56.22	+0.004
79	Geminorum . . .	6.3	7 40	41.738		-0.0013	+20 29 58.78	-0.012
g	Geminorum . . .	5.0	7 41	43.583		-0.0048	18 41 47.99	-0.063
209 B.	Geminorum . . .	6.2	7 47	31.707		-0.0029	19 31 15.30	-0.030
85	Geminorum . . .	5.2	7 51	13.922		-0.0011	20 5 8.78	-0.043
2 B.	Canceri . . .	6.0	7 54	11.470		+0.0003	16 43 28.90	+0.004
217 B.	Geminorum . . .	6.3	7 56	22.354		-0.0018	+20 1 32.67	-0.007
3	Canceri . . .	5.7	7 56	26.168		-0.0001	17 31 4.90	-0.010
5	Canceri . . .	5.9	7 57	10.524		+0.0004	16 39 57.88	0.000
10 H.	Canceri . . .	6.1	8 0	21.876		-0.0020	19 3 28.04	-0.046
ζ	Canceri (mean) . . .	4.7	8 7	51.349		+0.0051	17 52 41.67	-0.129
d ¹	Canceri . . .	5.9	8 19	0.885		-0.0038	+18 34 38.20	-0.031
d ²	Canceri . . .	6.2	8 21	31.934		-0.0132	17 17 52.12	-0.153
θ	Canceri . . .	5.5	8 27	15.910		-0.0039	18 21 7.74	-0.068
90 B.	Canceri . . .	6.3	8 31	52.143		+0.0006	15 34 38.65	-0.027
δ	Canceri . . .	4.2	8 40	22.148		-0.0009	18 26 4.51	-0.240
54	Canceri . . .	6.3	8 46	47.663		-0.0075	+15 38 0.75	+0.076
X	Canceri (var.) . . .	6.2	8 51	6.232		+0.0009	17 31 17.62	+0.013
o ¹	Canceri . . .	5.1	8 53	0.770		+0.0041	15 36 54.69	+0.022
o ²	Canceri . . .	5.7	8 53	20.693		+0.0043	+15 52 26.81	+0.023

472 MEAN PLACES OF OCCULTATION STARS, 1924.

Name of Star.		Magni- tude.	Right Ascension for 1924.0.			Annual Proper Motion.	Declination for 1924.0.	Annual Proper Motion.
			h	m	s	s	° ' "	"
81	Cancer	6.4	9	8	8.212	-0.0359	+15 18 11.60	+0.244
π	Cancer	5.6	9	11	2.308	-0.0022	15 15 27.64	-0.008
227	B. Cancer	6.4	9	17	3.880	..	15 41 40.62	..
12	B. Leonis	6.3	9	21	20.204	-0.0042	16 54 51.91	-0.014
7	Leonis	6.2	9	31	43.886	-0.0021	14 43 10.30	-0.002
11	Leonis	6.5	9	33	52.595	-0.0047	+14 41 29.67	-0.079
ψ	Leonis	5.6	9	39	35.717	-0.0002	14 22 12.00	-0.009
18	Leonis	5.8	9	42	17.844	-0.0006	12 9 38.68	+0.008
19	Leonis	6.4	9	43	20.848	-0.0049	11 55 13.69	+0.008
R	Leonis (var.)	4.6	9	43	28.360	-0.0005	11 46 55.79	-0.040
ν	Leonis	5.0	9	54	8.136	-0.0028	+12 48 28.14	-0.027
A	Leonis	4.6	10	3	52.401	-0.0057	10 22 14.34	-0.067
a	Leonis (<i>Regulus</i>)	1.3	10	4	19.604	-0.0169	12 20 21.22	-0.002
34	Leonis	6.4	10	7	33.201	+0.0037	13 43 51.49	-0.036
44	Leonis	5.9	10	21	15.073	+0.0018	9 10 18.14	-0.041
45	Leonis	5.8	10	23	38.271	+0.0011	+10 9 1.45	-0.003
q	Leonis	3.8	10	28	48.687	-0.0004	9 41 53.60	-0.003
49	Leonis	5.7	10	31	3.059	-0.0030	9 2 36.56	-0.010
l	Leonis	5.3	10	45	15.878	+0.0001	10 56 51.55	-0.033
c	Leonis	5.1	10	56	48.511	-0.0035	6 30 36.58	-0.025
χ	Leonis	4.7	11	1	5.876	-0.0234	+ 7 44 50.42	-0.040
308	B. Leonis	5.8	11	10	4.965	+0.0032	8 28 36.21	-0.125
σ	Leonis	4.1	11	17	13.124	-0.0062	6 26 46.15	-0.013
b	Virginis	5.2	11	56	3.396	-0.0008	4 4 42.79	-0.012
10	Virginis	6.2	12	5	47.672	+0.0034	+ 2 19 28.77	-0.181
γ	Virginis (<i>mean</i>)	2.9	12	37	48.570	-0.0365	- 1 1 58.02	+0.004
k	Virginis	5.7	12	55	44.531	-0.0027	3 24 8.50	-0.004
46	Virginis	6.1	12	56	41.001	-0.0026	2 57 36.37	+0.046
48	Virginis	6.5	12	59	59.351	-0.0033	3 15 15.96	-0.028
65	Virginis	6.0	13	19	22.477	-0.0016	4 31 38.07	-0.016
66	Virginis	5.7	13	20	35.734	+0.0105	- 4 46 1.93	-0.030
72	Virginis	6.1	13	26	27.669	-0.0023	6 4 42.21	+0.014
l	Virginis	4.8	13	28	0.602	-0.0069	5 51 49.77	-0.045
80	Virginis	5.6	13	31	33.935	+0.0010	5 0 34.28	+0.075
566	B. Virginis	6.4	13	39	56.786	-0.0049	5 6 59.77	-0.025
88	Virginis	6.5	13	44	19.265	-0.0032	- 6 27 31.71	-0.033
508	B. Virginis	6.1	13	50	58.853	-0.0121	7 41 7.88	-0.049
623	B. Virginis	6.5	14	0	19.879	-0.0026	8 53 34.53	+0.006
95	Virginis	5.4	14	2	41.479	-0.0098	8 57 4.81	+0.011
235	G. Virginis	6.5	14	13	58.211	+0.0117	7 11 11.41	-0.232
13	Librae	5.7	14	50	15.079	-0.0048	- 11 35 20.88	-0.020
ξ^a	Librae	5.6	14	52	38.439	-0.0006	11 6 13.96	-0.001
17	Librae	6.4	14	54	6.095	-0.0019	10 51 1.48	-0.021
18	Librae	5.9	14	54	46.764	-0.0079	10 50 22.46	-0.077
130	B. Librae	5.9	15	19	41.778	-0.0043	12 5 56.91	-0.038
γ	Librae	4.0	15	31	16.328	+0.0047	- 14 32 13.16	+0.007
190	B. Librae	6.5	15	39	8.973	-0.0009	14 48 2.18	-0.115
η	Librae	5.5	15	39	47.669	-0.0028	15 25 54.70	-0.079
195	B. Librae	6.2	15	47	23.582	-0.0010	- 13 54 18.16	+0.001

MEAN PLACES OF OCCULTATION STARS, 1924. 473

Name of Star.			Magni- tude.	Right Ascension for 1924.0.	Annual Proper Motion.	Declination for 1924.0.	Annual Proper Motion.
				h m s	s	° ′ ″	″
202 B.	Libræ	.	6.4	15 51 58.493	+0.0012	-14 10 37.57	-0.094
203 B.	Libræ	.	6.2	15 52 16.023	+0.0047	14 36 27.70	..
48	Libræ	.	4.6	15 53 55.854	-0.0004	14 3 40.22	-0.026
49	Libræ	.	5.4	15 56 3.574	-0.0434	16 18 37.61	-0.391
91 B.	Scorpii	.	6.1	16 11 33.926	..	14 39 35.09	..
98 B.	Scorpii	.	6.1	16 14 42.994	+0.0032	-14 41 20.79	-0.018
φ	Ophiuchi	.	4.4	16 26 47.164	-0.0039	16 26 52.86	-0.029
24	Scorpii	.	5.0	16 37 10.489	-0.0017	17 35 46.56	-0.004
78 B.	Ophiuchi	.	6.5	16 51 38.544	+0.0062	16 41 11.25	+0.024
90 B.	Ophiuchi	.	6.5	16 55 18.531	-0.0047	18 7 53.37	-0.156
29	Ophiuchi	.	6.4	16 57 24.380	-0.0024	-18 46 29.74	-0.020
125 B.	Ophiuchi	.	6.2	17 3 40.911	-0.0007	17 30 34.79	-0.049
164 B.	Ophiuchi	.	6.0	17 15 27.832	-0.0003	17 40 40.41	+0.001
192 B.	Ophiuchi	.	6.3	17 20 10.014	-0.0016	18 22 34.14	+0.009
305 B.	Ophiuchi	.	6.3	17 51 26.781	+0.0019	18 47 23.26	-0.003
16 G.	Sagittarii	.	6.4	17 55 28.872	+0.0016	-20 20 5.97	-0.025
39 G.	Sagittarii	.	6.3	18 6 44.410	-0.0027	19 51 29.26	-0.040
15	Sagittarii	.	5.3	18 10 40.865	+0.0003	20 45 7.20	+0.006
16	Sagittarii	.	5.9	18 10 41.664	+0.0005	20 24 42.81	-0.002
64 B.	Sagittarii	.	6.1	18 11 2.827	..	18 41 9.70	..
52 G.	Sagittarii	.	6.4	18 13 1.158	+0.0004	-18 29 31.43	-0.036
17 H.	Sagittarii	.	6.4	18 14 15.427	..	18 39 0.07	..
Y	Sagittarii (var.)	.	5.4	18 16 54.716	..	18 53 42.04	-0.001
21	Sagittarii	.	5.0	18 20 49.435	0.0000	20 35 0.89	-0.024
85 B.	Sagittarii	.	6.0	18 23 30.398	-0.0006	17 50 51.35	+0.006
95 B.	Sagittarii	.	5.7	18 25 43.926	+0.0041	-18 46 40.73	-0.072
100 B.	Sagittarii	.	5.0	18 26 59.086	-0.0012	18 27 21.70	-0.026
121 B.	Sagittarii	.	5.9	18 34 21.543	-0.0056	21 6 56.99	-0.138
128 B.	Sagittarii	.	6.3	18 40 46.489	+0.0019	21 4 48.31	-0.039
29	Sagittarii	.	5.3	18 45 9.588	+0.0005	20 24 44.67	+0.030
36	Sagittarii	.	5.1	18 52 49.484	-0.0010	-20 45 25.28	-0.011
ξ	Sagittarii	.	3.7	18 53 11.781	+0.0023	21 12 28.47	-0.023
171 B.	Sagittarii	.	6.1	18 58 35.812	0.0000	19 21 25.25	-0.035
173 B.	Sagittarii	.	6.4	18 58 39.319	+0.0020	19 12 49.65	..
187 B.	Sagittarii	.	6.4	19 2 41.649	+0.0036	18 51 23.94	-0.056
190 B.	Sagittarii	.	5.4	19 3 48.839	+0.0001	-19 24 38.04	-0.003
π	Sagittarii	.	3.0	19 5 14.692	-0.0005	21 8 44.58	-0.036
195 B.	Sagittarii	.	6.3	19 5 19.295	+0.0019	19 55 27.89	-0.050
d	Sagittarii	.	5.0	19 13 11.332	-0.0015	19 5 22.06	-0.017
226 B.	Sagittarii	.	6.4	19 17 9.983	+0.0002	19 22 39.22	+0.009
ρ	Sagittarii	.	4.0	19 17 15.960	-0.0020	-17 59 29.70	+0.015
45	Sagittarii	.	6.0	19 17 24.950	+0.0064	18 27 0.92	-0.082
266 B.	Sagittarii	.	6.1	19 32 0.285	+0.0003	19 1 18.74	-0.009
267 B.	Sagittarii	.	5.8	19 32 38.877	+0.0011	18 24 3.58	-0.002
f	Sagittarii	.	5.1	19 41 55.802	-0.0099	19 56 41.92	-0.088
57	Sagittarii	.	6.0	19 47 47.124	+0.0001	-19 14 20.86	-0.057
σ	Capricorni	.	5.5	20 15 0.626	-0.0002	19 21 24.36	-0.006
π	Capricorni	.	5.2	20 22 58.364	+0.0004	-18 27 42.44	-0.002

474 MEAN PLACES OF OCCULTATION STARS, 1924.

Name of Star.		Magni- tude.	Right Ascension for 1924.0.			Annual Proper Motion.	Declination for 1924.0.			Annual Proper Motion
			h	m	s	s	°	'	"	"
31	B. Capricorni . . .	6.4	20	24	26.751	+0.0013	-15	59	37.91	+0.019
ρ	Capricorni . . .	5.0	20	24	31.658	-0.0013	18	3	57.52	-0.020
o	Capricorni . . .	5.6	20	25	32.621	+0.0012	18	50	8.73	-0.081
47	B. Capricorni . . .	6.2	20	31	14.334	+0.0055	16	47	16.77	-0.033
τ	Capricorni . . .	5.2	20	35	1.503	+0.0006	15	13	20.20	-0.015
ν	Capricorni . . .	5.3	20	35	43.527	-0.0018	-18	24	25.42	-0.007
61	B. Capricorni . . .	5.9	20	36	16.502	-0.0032	16	23	43.59	+0.082
81	B. Capricorni . . .	6.4	20	45	2.017	-0.0004	18	19	1.45	-0.019
19	Capricorni . . .	5.7	20	50	30.320	-0.0041	18	12	43.16	-0.013
94	B. Capricorni . . .	5.7	20	53	25.541	+0.0046	16	19	28.47	+0.030
95	B. Capricorni . . .	5.9	20	54	29.582	..	-14	46	38.60	..
21	Capricorni . . .	6.5	20	56	35.283	-0.0025	17	49	40.85	-0.002
θ	Capricorni . . .	4.2	21	1	40.624	+0.0051	17	32	9.15	-0.066
114	B. Capricorni . . .	6.1	21	10	51.617	-0.0011	17	39	36.23	..
29	Capricorni . . .	5.5	21	11	32.590	+0.0016	15	29	17.46	+0.004
53	B. Aquarii . . .	6.5	21	11	49.950	+0.0004	-13	31	4.97	-0.039
ι	Capricorni . . .	4.3	21	18	1.055	+0.0022	17	9	32.67	+0.004
18	Aquarii . . .	5.5	21	20	2.400	+0.0054	13	12	18.53	+0.007
42	Capricorni . . .	5.1	21	37	25.065	-0.0084	14	23	13.80	-0.302
44	Capricorni . . .	6.0	21	38	55.745	-0.0005	14	44	52.39	+0.024
45	Capricorni . . .	5.8	21	39	52.159	-0.0013	-15	5	54.71	-0.002
λ	Capricorni . . .	5.5	21	42	26.742	+0.0015	11	43	1.60	-0.004
151	B. Capricorni . . .	6.1	21	45	34.711	-0.0009	13	4	39.64	+0.031
μ	Capricorni . . .	5.2	21	49	9.248	+0.0204	13	54	37.42	+0.001
ι	Aquarii . . .	4.4	22	2	20.056	+0.0022	14	14	20.66	-0.062
ε	Aquarii . . .	5.4	22	6	33.802	+0.0019	-11	56	21.05	+0.020
42	Aquarii . . .	5.5	22	12	44.046	+0.0010	13	12	39.62	+0.009
45	Aquarii . . .	6.1	22	14	56.136	+0.0051	13	41	9.53	-0.002
σ	Aquarii . . .	4.9	22	26	37.627	0.0000	11	4	2.26	-0.026
58	Aquarii . . .	6.4	22	27	39.682	+0.0050	11	17	43.43	-0.032
167	G. Aquarii . . .	6.3	22	34	22.784	+0.0010	- 8	17	33.66	+0.012
213	B. Aquarii . . .	6.5	22	39	4.588	+0.0014	8	42	33.84	+0.031
70	Aquarii . . .	6.1	22	44	30.432	+0.0035	10	57	25.82	+0.010
λ	Aquarii . . .	3.8	22	48	39.027	+0.0002	7	59	3.92	+0.035
78	Aquarii . . .	6.3	22	50	36.701	-0.0017	7	36	32.18	-0.029
81	Aquarii . . .	6.4	22	57	26.706	-0.0015	- 7	28	10.30	-0.001
82	Aquarii . . .	6.4	22	58	35.941	0.0000	6	58	56.81	-0.034
h	Aquarii . . .	5.4	23	1	12.046	+0.0081	8	6	15.09	+0.016
φ	Aquarii . . .	4.4	23	10	23.198	+0.0015	6	27	32.41	-0.194
χ	Aquarii . . .	5.3	23	12	54.626	-0.0015	8	8	28.49	-0.014
96	Aquarii . . .	5.7	23	15	27.547	+0.0128	- 5	32	23.10	-0.010
317	B. Aquarii . . .	6.3	23	16	45.833	-0.0099	6	19	23.75	-0.065
337	B. Aquarii . . .	6.4	23	25	36.362	+0.0121	4	56	48.15	-0.218
342	B. Aquarii . . .	6.5	23	27	36.028	+0.0124	4	30	9.64	-0.172
20	Piscium . . .	5.6	23	44	2.148	+0.0064	3	11	3.30	+0.002
24	Piscium . . .	6.1	23	49	1.343	+0.0051	- 3	34	39.44	-0.048
27	Piscium . . .	5.1	23	54	46.935	-0.0034	3	58	39.24	-0.066
29	Piscium . . .	5.1	23	57	55.737	+0.0009	- 3	27	2.00	-0.012

ELEMENTS OF OCCULTATIONS, 1924. 475

JANUARY.

THE STAR'S					AT CONJUNCTION IN R.A.					Limiting Parallels.	
Name.	Mag.	Reductions from 1924.0		Apparent Declina- tion.	Greenwich Mean Time.	Hour Angle, H	P	α'	γ'	N.	S.
		$\Delta\alpha$	$\Delta\delta$		d h m	h m					
95 Virginis	5.4	-0.87	+8.6	-8 56.9	1 0 33.9	+5 10.8	+1.0782	0.5732	-0.1789	+82	+29
13 Libræ	5.7	1.10	10.0	11 35.2	20 54.3	+0 47.0	+0.2576	0.5836	0.1603	+45	-22
ξ ² Libræ	5.6	1.12	9.9	11 6.1	21 54.5	+1 45.0	-0.3879	0.5841	0.1591	+9	-60
17 Libræ	6.4	1.13	9.8	10 50.9	22 31.3	+2 20.4	-0.7385	0.5845	0.1583	-10	-90
18 Libræ	5.9	1.13	9.8	10 50.2	22 48.3	+2 36.7	-0.7942	0.5846	0.1581	-14	-90
130 B. Libræ	5.9	-1.25	+10.3	-12 5.8	2 9 8.7	-11 26.1	-1.1018	0.5901	-0.1448	-37	-90
γ Libræ	4.0	1.30	11.0	14 32.0	13 53.2	-6 52.4	+0.6574	0.5926	0.1380	+72	+1
190 B. Libræ	6.5	1.34	11.0	14 47.9	17 5.6	-3 47.3	+0.4847	0.5943	0.1332	+58	-9
η Libræ	5.5	1.34	11.2	15 25.7	17 21.3	-3 32.2	+1.0783	0.5944	0.1328	+75	+30
195 B. Libræ	6.2	1.38	10.7	13 54.1	20 25.8	-0 34.8	-0.8423	0.5960	0.1279	-20	-90
202 B. Libræ	6.4	-1.39	+10.8	-14 10.4	22 16.6	+1 11.7	-0.8050	0.5968	-0.1250	-18	-90
203 B. Libræ	6.2	1.40	10.9	14 36.3	22 23.9	+1 18.7	-0.3919	0.5969	0.1248	+6	-61
48 Libræ	4.6	1.40	10.7	14 3.5	23 3.8	+1 57.1	-1.0180	0.5972	0.1237	-33	-90
49 Libræ	5.4	1.42	11.2	16 18.4	23 55.1	+2 46.4	+1.1138	0.5977	0.1223	+74	+34
91 B. Scorpii	6.1	1.48	10.7	14 39.4	3 6 6.8	+8 43.7	-1.2518	0.6005	0.1116	-58	-89
φ Ophiuchi	4.4	-1.55	+10.8	-16 26.7	12 8.6	-9 28.8	-0.1147	0.6030	-0.1005	+18	-43
24 Scorpii	5.0	1.59	10.8	17 35.6	16 14.0	-5 33.0	+0.6304	0.6046	0.0927	+66	0
78 B. Ophiuchi	6.5	1.64	10.4	16 41.0	21 53.8	-0 6.8	-0.7663	0.6065	0.0815	-20	-90
90 B. Ophiuchi	6.5	1.66	10.5	18 7.7	23 19.6	+1 15.5	+0.5539	0.6070	0.0785	+57	-4
29 Ophiuchi	6.4	1.68	+10.6	18 46.3	4 0 8.7	+2 2.6	+1.1293	0.6072	-0.0769	+72	+37
NEW MOON.											
29 Capricorni	5.5	-1.70	-1.0	-15 29.3	8 5 9.5	+3 5.9	+0.8779	0.5774	+0.1254	+75	+15
53 B. Aquarii	6.5	1.67	0.7	13 31.1	5 17.0	+3 13.2	-1.1324	0.5774	0.1256	-42	-90
18 Aquarii	5.5	1.64	1.0	13 12.3	8 50.1	+6 38.7	-1.0021	0.5749	0.1304	-30	-90
42 Capricorni	5.1	-1.60	-2.2	-14 23.3	16 27.4	-10 0.2	+1.2507	0.5694	+0.1399	+76	+50
λ Capricorni	5.5	1.54	1.9	11 43.1	18 41.3	-7 50.9	-1.2007	0.5678	0.1425	-47	-90
151 B. Capricorni	6.1	1.55	2.4	13 7.4	20 5.1	-6 30.1	+0.4105	0.5668	0.1441	+54	-13
e Aquarii	5.4	1.45	3.2	11 56.4	9 53.8	+2 39.2	+0.6416	0.5602	0.1538	+73	0
σ Aquarii	4.9	1.35	4.1	11 4.1	14 49.8	+11 36.5	+1.1969	0.5540	0.1617	+79	+41
167 G. Aquarii	6.3	-1.28	-3.7	-8 17.6	18 27.8	-8 52.6	-1.1274	0.5517	+0.1644	-36	-90
213 B. Aquarii	6.5	1.27	4.1	8 42.6	20 40.7	-6 44.0	-0.3234	0.5502	0.1659	+15	-56
λ Aquarii	3.8	1.21	4.3	7 59.1	10 13.7	-2 19.7	-0.3277	0.5475	0.1688	+15	-56
78 Aquarii	6.3	1.20	4.3	7 36.6	2 10.0	-1 25.2	-0.5663	0.5469	0.1694	+2	-74
81 Aquarii	6.4	1.17	4.6	7 28.2	5 26.9	+1 45.4	-0.1557	0.5450	0.1712	+24	-45
82 Aquarii	6.4	-1.15	-4.5	-6 59.0	6 0.3	+2 17.7	-0.5767	0.5446	+0.1715	+1	-75
h Aquarii	5.4	1.16	5.0	8 6.3	7 15.6	+3 30.6	+0.8289	0.5439	0.1722	+82	+11
URANUS	6.2	..	..	6 45.9	8 48.5	+5 0.5	-0.3271	0.5415	0.1723	+16	-55
φ Aquarii	4.4	1.09	4.8	6 27.6	11 43.4	+7 49.9	-0.1447	0.5414	0.1743	+26	-44
96 Aquarii	5.7	1.05	4.8	5 32.5	14 12.2	+10 14.1	-0.6902	0.5401	0.1753	-4	-88
317 B. Aquarii	6.3	-1.06	-5.1	-6 19.5	14 50.6	+10 51.3	+0.2568	0.5398	+0.1755	+49	-22
337 B. Aquarii	6.4	1.00	5.1	4 56.9	19 12.1	-8 55.3	-0.4438	0.5375	0.1771	+10	-64
342 B. Aquarii	6.5	0.98	5.1	4 30.2	20 11.3	-7 58.0	-0.7436	0.5371	0.1774	-7	-90
20 Piscium	5.6	0.88	5.4	3 11.1	11 4 23.4	-0 1.0	-0.6953	0.5333	0.1795	-3	-88
24 Piscium	6.1	0.86	5.7	3 34.8	6 53.9	+2 24.9	+0.1781	0.5322	0.1799	+45	-26
27 Piscium	5.1	-0.83	-6.1	-3 58.8	9 48.6	+5 14.3	+1.1340	0.5310	+0.1804	+87	+33
29 Piscium	5.1	0.81	6.0	3 27.1	11 24.3	+6 47.2	+0.8548	0.5305	0.1805	+87	+12
4 Ceti	6.3	0.77	6.1	2 58.4	14 24.7	+9 42.2	-0.8828	0.5293	0.1808	+88	+14
5 Ceti	6.3	0.77	6.1	2 52.3	14 39.0	+9 56.0	+0.8167	0.5292	0.1808	+88	+10
10 Ceti	6.4	0.64	6.0	0 28.3	12 0 5.4	-4 54.3	-0.0711	0.5262	0.1808	+31	-40
14 Ceti	5.4	-0.60	-6.5	-0 55.5	4 41.8	-0 26.1	+1.2542	0.5250	+0.1805	+90	+46

476 ELEMENTS OF OCCULTATIONS, 1924.

JANUARY.

THE STAR'S					AT CONJUNCTION IN R.A.					Limiting Parallels.	
Name.	Mag.	Reductions from 1924.0		Apparent Declina- tion.	Greenwich Mean Time.	Hour Angle, H	P	x'	y'	N.	S.
		$\Delta\alpha$	$\Delta\delta$		d h m	h m					
33 Ceti	6.1	-0.38	-6.8	+2 2.4	12 22 56.4	-6 43.5	+1.2921	0.5217	+0.1766	+89	+52
f Piscium	5.3	0.33	6.6	3 12.8	13 2 43.9	-3 2.7	+0.6755	0.5213	+0.1754	+86	+2
μ Piscium	5.0	0.23	6.1	5 45.1	9 12.2	+3 14.3	-0.9837	0.5209	+0.1729	-21	-85
ν Piscium	4.7	0.18	6.7	5 6.1	15 7.8	+8 59.6	+0.7470	0.5208	+0.1702	+90	+7
39 B. Arietis	6.5	-0.03	6.7	7 22.2	14 3 24.2	-3 5.3	+0.2987	0.5211	+0.1636	+54	-17
64 Ceti	5.8	+0.01	-6.6	8 12.8	6 48.6	+0 13.1	-0.0788	0.5217	+0.1614	131	-37
ξ^1 Ceti	4.5	0.02	6.6	8 29.3	7 39.9	+1 2.9	-0.2459	0.5218	+0.1609	122	-47
ξ Arietis	5.5	0.00	6.3	10 15.9	13 49.4	+7 1.7	-1.2319	0.5226	+0.1567	-45	-80
25 Anetis	6.5	0.10	6.6	9 51.6	15 11.0	+8 20.9	-0.5714	0.5228	+0.1557	+1	-70
389 B. Ceti	6.3	0.11	6.8	9 13.5	16 19.3	+9 27.2	+0.3075	0.5230	+0.1519	+55	-15
85 Ceti	6.3	+0.19	-6.8	+10 25.0	23 0.8	-8 3.1	+0.0086	0.5212	+0.1497	130	-31
μ Ceti	1.4	0.20	7.1	9 17.5	15 0.16.9	-6 49.2	+0.8891	0.5245	+0.1487	190	119
147 B. Arietis	5.8	0.32	6.7	12 53.6	11 19.7	+3 54.1	-0.9511	0.5272	+0.1391	-19	-78
8 B. Tauri	6.2	0.40	7.4	12 21.5	20 21.9	-11 17.0	+0.8622	0.5297	+0.1303	190	119
f Tauri	4.3	0.44	7.4	12 40.5	23 49.0	-7 59.1	+0.9490	0.5308	+0.1268	+90	+26
179 B. Tauri	5.9	+0.61	-7.7	+14 57.5	16 18 1.7	+9 52.9	+0.5677	0.5371	+0.1057	+75	+5
48 Tauri	6.3	0.61	7.9	15 12.6	22 14.0	-10 15.1	+0.7011	0.5386	+0.1007	+90	+13
γ Tauri	3.9	0.60	7.9	15 26.6	17 0 12.7	-8 20.2	+0.6391	0.5393	+0.0982	184	+10
58 Tauri	5.1	0.66	8.1	14 54.7	0 37.1	-7 56.5	+1.2658	0.5394	+0.0976	+85	+62
63 Tauri	5.7	0.68	7.7	16 35.9	1 58.6	-6 37.6	-0.4666	0.5399	+0.0959	19	-54
64 Tauri	4.9	+0.60	-7.5	+17 16.0	2 18.1	-6 18.6	-1.1738	0.5401	+0.0951	-41	-73
70 Tauri	6.4	0.68	8.0	15 46.0	3 4.2	-5 34.0	+0.5573	0.5404	+0.0944	+75	+5
71 Tauri	4.6	0.68	8.1	15 26.7	3 25.8	-5 13.0	+0.9462	0.5405	+0.0940	+90	+29
75 Tauri	5.2	0.70	7.9	16 11.3	4 26.9	-4 13.9	+0.2196	0.5408	+0.0926	+49	-13
θ^1 Tauri	4.2	0.70	8.0	15 47.6	4 31.0	-4 9.9	+0.6633	0.5409	+0.0925	187	+11
θ^2 Tauri	3.6	+0.70	-8.0	+15 42.1	4 33.7	-4 7.2	+0.7681	0.5409	+0.0925	+90	+18
80 Tauri	5.8	0.70	8.2	15 28.3	5 17.3	-3 25.0	+1.0892	0.5412	+0.0915	190	+41
264 B. Tauri	4.8	0.70	8.0	16 1.7	5 29.1	-3 13.6	+0.1925	0.5412	+0.0912	169	+2
81 Tauri	5.5	0.70	8.2	+15 31.5	5 32.1	-3 10.7	+1.0516	0.5412	+0.0912	+90	+38
85 Tauri	6.0	0.71	8.1	15 41.3	6 7.5	-2 36.4	+0.9262	0.5415	+0.0904	+90	+29
275 B. Tauri	6.5	+0.72	-8.0	+16 9.8	6 50.2	-1 46.1	+0.4788	0.5418	+0.0892	+68	+2
a Tauri (Alde.)	1.1	0.73	8.1	16 21.3	8 5.8	-0 41.9	+0.3641	0.5423	+0.0877	+59	-4
89 Tauri	5.8	0.73	8.2	15 52.8	9 11.5	+0 21.8	+0.9839	0.5426	+0.0862	+90	+33
σ^1 Tauri	5.2	0.73	8.3	15 39.0	9 40.9	+0 50.3	+1.2804	0.5428	+0.0855	+79	+67
σ^2 Tauri	4.9	0.73	8.3	15 46.0	9 44.2	+0 53.5	+1.1560	0.5428	+0.0854	+90	+48
318 B. Tauri	5.7	+0.80	-8.4	+17 2.0	18 28.2	+9 20.8	+0.4502	0.5461	+0.0730	+65	+1
m Tauri	5.0	0.81	8.3	18 32.5	23 15.3	-10 1.3	-0.8776	0.5479	+0.0660	-16	-72
111 Tauri	5.1	0.88	9.0	17 18.7	7 21.1	-2 10.9	+0.9591	0.5507	+0.0536	190	+34
115 Tauri	5.3	0.89	8.9	17 53.8	8 39.4	-0 55.4	+0.3860	0.5513	+0.0515	161	+1
117 Tauri	6.0	0.89	9.1	17 10.5	9 4.3	-0 31.3	+1.1991	0.5514	+0.0509	+90	+57
119 Tauri	4.9	+0.91	-8.8	+18 32.2	11 1.6	+1 22.1	-0.1993	0.5520	+0.0478	+24	-32
120 Tauri	5.6	0.91	8.9	18 29.1	11 38.8	+1 58.1	-0.1132	0.5522	+0.0468	+29	-26
130 Tauri	5.6	0.94	9.3	17 42.0	18 11.2	+8 17.7	+1.0182	0.5544	+0.0363	+90	+41
B. D. +19° 11.10	6.0	0.96	9.0	19 50.8	20 28.0	+10 30.0	-1.2527	0.5552	+0.0325	-57	-71
57 Orionis	5.8	0.97	9.1	19 44.0	21 39.5	+11 39.1	-1.0907	0.5555	+0.0305	-34	-71
64 Orionis	5.1	+0.98	-9.3	+19 41.4	19 1 37.0	-8 31.2	-0.9346	0.5567	+0.0240	-21	-71
68 Orionis	5.7	1.00	9.4	19 48.4	5 35.0	-4 41.1	-0.9778	0.5579	+0.0173	-24	-71
19 B. Geminorum	6.2	1.00	9.6	18 41.9	6 18.6	-3 59.0	+0.2419	0.5581	+0.0160	+51	-4
124 H ¹ Orionis	5.7	0.99	9.8	17 55.6	6 44.8	-3 33.7	+1.0908	0.5582	+0.0153	+90	+49
71 Orionis	5.1	1.00	9.6	19 10.9	6 54.2	-3 24.6	-0.2745	0.5582	+0.0150	+20	-33
292 B. Orionis	6.5	+1.00	-9.9	+17 47.9	9 57.4	-0 27.5	+1.2698	0.5590	+0.0098	+77	+70

ELEMENTS OF OCCULTATIONS, 1924. 477

JANUARY.

THE STAR'S					AT CONJUNCTION IN R.A.					Limiting Parallels.	
Name.	Mag.	Reductions from 1924.0		Apparent Declina- tion.	Greenwich Mean Time.	Hour Angle, <i>H</i>	<i>Y</i>	<i>z'</i>	<i>y'</i>	N.	S.
		$\Delta\alpha$	$\Delta\delta$		d h m	h m					
74 B. Geminorum	6.2	1.04	-10.2	18 10.5	19 21 51.2	+11 2.3	+0.7125	0.5618	-0.0108	1 00	1 25
110 B. Geminorum	6.2	1.05	10.4	17 51.7	20 4 42.6	-6 20.2	+1.0722	0.5630	0.0228	+90	+47
162 B. Geminorum	5.7	1.00	10.7	17 14.8	18 2.5	+6 32.4	+1.2711	0.5647	0.0460	+78	+69
<i>f</i> Geminorum	5.3	1.06	10.7	17 50.8	21 30.3	+9 53.1	+0.4551	0.5649	0.0521	+66	+5
<i>g</i> Geminorum	5.0	1.06	10.7	18 41.6	21 0 30.1	-11 13.2	-0.6191	0.5652	0.0572	0	-62
2 B. Cancri	6.0	+1.05	-10.8	+16 43.3	6 7.5	-5 47.4	+1.1464	0.5654	-0.0668	+90	+49
3 Cancri	5.7	1.05	10.8	17 30.9	7 8.3	-4 48.7	+1.0279	0.5654	0.0685	+50	-10
5 Cancri	5.9	1.05	10.8	16 39.8	7 28.3	-4 29.4	+1.1171	0.5654	0.0691	+90	+46
ζ Can. (<i>mean</i>)	4.7	1.05	10.8	17 52.5	12 17.2	+0 9.6	-0.5323	0.5655	0.0771	1 0	-57
δ^2 Cancri	6.2	1.03	10.8	17 17.7	18 27.3	+6 7.1	-0.4187	0.5654	0.0872	1 12	-49
90 B. Cancri	6.3	+1.02	-10.8	+15 34.5	23 7.2	+10 37.4	+0.9890	0.5652	-0.0947	+90	+33
54 Cancri	6.3	1.00	10.7	15 37.8	22 5 51.6	-6 51.9	+0.2537	0.5648	0.1052	+51	-12
θ^1 Cancri	5.1	1.00	10.7	15 36.7	8 40.3	-4 9.0	-0.0288	0.5645	0.1091	+34	-28
θ^2 Cancri	5.7	1.00	10.7	15 52.3	8 49.4	-4 0.3	-0.3198	0.5645	0.1090	+18	-45
81 Cancri	6.4	0.97	10.5	15 18.0	15 31.2	+2 27.8	-0.4818	0.5639	0.1195	1 9	-57
π Cancri	5.6	+0.96	-10.5	+15 15.3	16 50.1	+3 14.1	-0.5917	0.5638	-0.1213	+3	-65
7 Leonis	6.2	0.92	10.2	14 43.0	23 2 14.1	-11 11.0	-1.2220	0.5627	0.1341	-46	-76
18 Leonis	5.8	0.91	9.8	12 9.5	7 2.8	-6 32.1	+0.8114	0.5621	0.1403	+90	+16
19 Leonis	6.4	0.91	9.7	11 55.1	7 31.6	-6 4.4	+0.9966	0.5620	0.1408	1 90	+29
<i>R</i> Leonis (<i>var.</i>)	4.6	0.91	9.7	11 46.8	7 35.0	-6 1.1	+1.1339	0.5620	0.1409	+90	+40
ν Leonis	5.0	+0.87	-9.7	+12 48.3	12 27.0	-1 19.0	-0.6439	0.5614	-0.1467	0	-73
<i>A</i> Leonis	4.6	0.86	9.2	10 22.1	16 54.2	+2 59.3	+1.2407	0.5608	0.1518	+90	+52
<i>a</i> Leonis (<i>Reg.</i>)	1.3	0.85	9.4	12 20.2	17 6.7	+3 11.4	-0.8478	0.5608	0.1521	-13	-78
44 Leonis	5.9	0.82	8.6	9 10.2	24 0 52.2	+10 41.2	+1.2512	0.5597	0.1603	+90	+51
45 Leonis	5.8	0.81	8.7	10 8.9	1 58.0	+11 44.8	+0.0551	0.5596	0.1613	+39	-29
ρ Leonis	3.8	+0.79	-8.5	+9 41.8	4 20.6	-9 57.3	+0.1411	0.5593	-0.1636	1 44	-24
49 Leonis	5.7	0.79	8.3	9 2.5	5 22.4	-8 57.6	+0.6553	0.5592	0.1645	1 84	+4
<i>c</i> Leonis	5.1	0.72	7.1	6 30.5	17 14.4	+2 36.6	+1.2755	0.5580	0.1746	1 90	1 53
χ Leonis	4.7	0.70	7.3	7 44.7	19 13.2	+4 25.1	-0.3574	0.5578	0.1760	+16	-55
σ Leonis	4.1	0.65	6.5	6 26.7	25 2 40.0	+11 37.3	-0.3360	0.5573	0.1809	+17	-54
<i>b</i> Virginis	5.2	+0.51	-4.8	+4 4.6	20 37.5	+4 58.9	-1.2144	0.5570	-0.1890	-41	-86
10 Virginis	6.2	0.48	4.0	+2 19.1	26 1 7.4	+9 19.9	-0.2595	0.5572	0.1902	+22	-50
γ Virg. (<i>mean</i>)	2.9	0.37	1.9	-1 2.0	15 52.2	-0 24.9	+0.3703	0.5584	0.1916	+58	-16
<i>k</i> Virginis	5.7	0.30	0.5	3 24.2	27 0 5.0	+7 31.3	+1.2246	0.5597	0.1908	+87	+42
46 Virginis	6.1	0.30	0.6	2 57.6	0 30.8	+7 56.2	+0.6898	0.5598	0.1907	+88	+2
48 Virginis	6.5	1.028	-0.4	-3 15.3	2 1.3	+9 23.6	+0.7031	0.5600	-0.1904	+87	+3
65 Virginis	6.0	0.20	1.0	4 31.6	10 50.2	-6 5.1	+0.3338	0.5619	0.1880	+54	-18
66 Virginis	5.7	0.20	0.8	4 46.0	11 23.4	-5 33.4	+0.4748	0.5620	0.1878	1 64	-10
72 Virginis	6.1	0.18	1.4	6 4.7	14 2.5	-2 59.7	+1.3155	0.5627	0.1867	+80	1 58
<i>l</i> Virginis	4.8	0.17	1.3	5 51.8	14 44.5	-2 19.1	+0.9658	0.5629	0.1864	+85	+20
80 Virginis	5.6	+0.14	+1.2	-5 0.6	16 20.7	-0 46.2	-0.2038	0.5632	-0.1857	+23	-48
566 B. Virginis	6.4	0.10	1.4	5 7.0	20 6.9	+2 52.3	-0.7909	0.5643	0.1838	-10	-90
88 Virginis	6.5	0.09	2.0	6 27.5	22 4.6	+4 45.9	+0.2167	0.5649	0.1827	+46	-24
598 B. Virginis	6.1	+0.06	2.7	7 41.1	28 1 3.4	+7 38.5	+0.9233	0.5658	0.1810	+83	+17
95 Virginis	5.4	0.00	3.4	8 57.0	6 16.2	-11 19.6	+1.2749	0.5675	0.1775	+82	+51
13 Libræ	5.7	-0.24	1.5	-11 35.3	29 3 5.9	+8 46.1	+0.4339	0.5753	-0.1586	+57	-12
ξ^2 Libræ	5.6	0.26	5.3	11 6.1	4 7.8	+9 45.8	-0.2206	0.5757	0.1575	+19	-49
17 Libræ	6.4	0.27	5.3	10 50.9	4 45.5	+10 22.1	-0.5762	0.5760	0.1568	-1	-76
18 Libræ	5.9	0.27	5.3	10 50.3	5 3.1	+10 39.0	-0.6328	0.5761	0.1564	-4	-82
130 B. Libræ	5.9	0.40	6.1	12 5.8	15 42.0	-3 5.2	-0.9553	0.5806	0.1433	-26	-90
γ Libræ	4.0	-0.46	+7.1	-14 32.1	20 35.5	+1 37.5	+0.8236	0.5827	-0.1367	+76	+12

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THE STAR'S					AT CONJUNCTION IN R.A.					Limiting Parallels.	
Name.	Mag.	Reductions from 1924.0		Apparent Declina- tion.	Greenwich Mean Time.	Hour Angle, H	Y	x'	y'	N.	S.
		$\Delta\alpha$	$\Delta\delta$								
190 B. Libræ	6.5	-0.50	+ 7.3	-14 47.9	d 23 54.1	+ 4 48.8	+0.6451	0.5841	-0.1319	+71	0
η Libræ	5.5	0.50	7.5	15 25.8	30 0 10.3	+ 5 4.3	+1.2470	0.5842	0.1315	+75	+50
195 B. Libræ	6.2	0.55	7.0	13 54.2	3 21.0	+ 8 8.0	-0.7052	0.5855	0.1268	-12	-90
202 B. Libræ	6.4	0.58	7.2	14 10.5	5 15.5	+ 9 58.2	-0.6695	0.5863	0.1238	-10	-88
203 B. Libræ	6.2	0.58	7.3	14 36.3	5 23.0	+10 5.4	-0.2504	0.5864	0.1236	+14	-51
48 Libræ	4.6	-0.59	+ 7.1	-14 3.6	6 4.3	+10 45.2	-0.8867	0.5867	-0.1225	-23	-90
49 Libræ	5.4	0.60	7.9	16 18.5	6 57.3	+11 36.2	+1.2760	0.5870	0.1212	+74	+57
91 B. Scorp̄ii	6.1	0.68	7.4	14 39.5	13 21.9	- 6 13.7	-1.1331	0.5897	0.1107	-44	-90
98 B. Scorp̄ii	6.1	0.70	7.4	14 41.2	14 39.6	- 4 58.9	-1.2453	0.5902	0.1085	-58	-89
φ Ophiuchi	4.4	0.77	7.9	16 26.7	19 36.3	- 0 13.5	+0.0137	0.5920	0.0998	+26	-35
24 Scorp̄ii	5.0	-0.82	+ 8.2	-17 35.6	23 50.3	+ 3 50.8	+0.7649	0.5935	-0.0922	+73	+ 8
78 B. Ophiuchi	6.5	0.90	7.9	16 41.1	31 5 42.1	+ 9 29.2	-0.6611	0.5955	0.0812	-13	-87
90 B. Ophiuchi	6.5	0.92	8.2	18 7.8	7 10.9	+10 54.6	+0.6775	0.5959	0.0784	+68	+ 3
29 Ophiuchi	6.4	0.93	8.4	18 46.4	8 1.7	+11 43.4	+1.2605	0.5962	0.0768	+72	+57
125 B. Ophiuchi	6.2	0.96	8.0	17 30.4	10 36.9	- 9 47.4	-0.2072	0.5969	0.0717	+11	-48
164 B. Ophiuchi	6.0	-1.02	+ 7.9	-17 40.5	15 17.1	- 5 18.0	-0.3510	0.5981	-0.0625	+ 2	-58
192 B. Ophiuchi	6.3	-1.05	+ 8.0	-18 22.4	17 10.1	- 3 29.4	+0.2390	0.5986	-0.0587	+35	-22

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305 B. Ophiuchi	6.3	-1.19	+ 7.5	-18 47.3	1 5 38.5	+ 8 29.7	+0.0850	0.6007	-0.0328	+23	-31
39 G. Sagittarii	6.3	1.27	7.3	19 51.4	11 43.2	- 9 39.9	+1.0034	0.6012	0.0199	+71	+26
64 B. Sagittarii	6.1	1.28	6.9	18 41.0	13 25.9	- 8 1.2	-0.2108	0.6012	0.0162	+ 6	-49
52 G. Sagittarii	6.4	1.28	6.8	18 29.4	14 12.9	- 7 16.1	-0.4187	0.6013	0.0146	- 7	-63
17 H ¹ . Sagittarii	6.4	1.29	6.8	18 38.9	14 42.4	- 6 47.7	-0.2662	0.6013	0.0135	+ 2	-52
Y Sagit. (var.)	5.4	-1.30	+ 6.8	-18 53.6	15 45.7	- 5 46.9	-0.0318	0.6013	-0.0113	+15	-38
85 B. Sagittarii	6.0	1.32	6.4	17 50.8	18 22.8	- 3 16.0	-1.1122	0.6013	0.0056	-52	-90
95 B. Sagittarii	5.7	1.33	6.5	18 46.6	19 15.9	- 2 24.9	-0.1763	0.6013	0.0038	+ 6	-47
100 B. Sagittarii	5.0	1.34	6.4	18 27.3	19 45.8	- 1 56.3	-0.5032	0.6013	-0.0027	-12	-70
171 B. Sagittarii	6.1	1.46	5.5	19 21.3	2 8 21.0	+10 9.6	+0.5439	0.6000	+0.0241	+52	- 5
173 B. Sagittarii	6.4	-1.46	+ 5.4	-19 12.7	8 22.5	+10 11.0	+0.3994	0.6000	+0.0242	+41	-13
187 B. Sagittarii	6.4	1.46	5.2	18 51.3	9 59.3	+11 43.9	+0.0796	0.5997	0.0276	+23	-31
190 B. Sagittarii	5.4	1.47	5.2	19 24.5	10 26.2	-11 50.2	+0.6534	0.5997	0.0285	+63	+ 2
195 B. Sagittarii	6.3	1.48	+ 5.3	19 55.4	11 2.4	-11 15.5	+1.1918	0.5995	0.0298	+71	+46
NEW MOON.											
81 Aquarii	6.4	-1.31	- 5.6	- 7 28.3	6 15 7.6	-10 45.9	-0.2536	0.5502	+0.1719	+19	-51
82 Aquarii	6.4	1.30	5.5	6 59.0	15 40.5	-10 14.1	-0.6735	0.5500	0.1723	- 4	-86
h Aquarii	5.4	1.31	5.8	6 6.3	16 54.8	- 9 2.2	-0.7250	0.5493	0.1729	+82	+ 4
URANUS	6.3	..	..	6 16.1	20 39.6	- 5 24.6	-0.5661	0.5453	0.1740	+ 3	-73
φ Aquarii	4.4	-1.26	- 6.0	- 6 27.6	21 18.6	- 4 46.9	-0.2488	0.5470	+0.1752	+20	-51
96 Aquarii	5.7	1.24	6.0	5 32.5	23 45.2	- 2 24.9	-0.7940	0.5458	0.1763	-10	-90
317 B. Aquarii	6.3	1.24	6.2	6 19.5	7 0 23.0	- 1 48.2	+0.1478	0.5455	0.1766	+42	-28
337 B. Aquarii	6.4	1.20	6.4	4 56.9	4 40.3	+ 2 20.9	-0.5531	0.5434	0.1782	+ 4	-73
342 B. Aquarii	6.5	1.18	6.4	4 30.3	5 38.6	+ 3 17.3	-0.8522	0.5429	0.1785	-14	-90
VENUS	-3.5	..	..	- 3 24.1	10 55.6	+ 8 24.4	-1.0844	0.4930	+0.1573	-31	-90
20 Piscium	5.6	-1.11	- 6.8	3 11.2	13 42.5	+11 6.2	-0.8104	0.5393	0.1808	-10	-90
24 Piscium	6.1	1.10	7.0	3 34.8	16 10.5	-10 30.4	+0.0561	0.5383	0.1813	+38	-33
27 Piscium	5.1	1.08	7.4	3 58.8	19 2.1	- 7 44.2	+1.0041	0.5371	0.1818	+87	+23
29 Piscium	5.1	1.06	7.4	3 27.2	20 36.2	- 6 12.9	+0.7255	0.5365	0.1820	+87	+ 4
4 Ceti	6.3	-1.04	- 7.5	- 2 58.4	23 33.4	- 3 21.0	+0.7514	0.5354	+0.1823	+88	+ 6

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THE STAR'S					AT CONJUNCTION IN R.A.					Limiting Parallels.	
Name.	Mag.	Reductions from 1924.0		Apparent Declination.	Greenwich Mean Time.	Hour Angle, H	P	z'	y'	N.	S.
		$\Delta\alpha$	$\Delta\delta$								
5 Ceti	6.3	-1.04	-7.5	-2 52.3	7 23 47.5	-3 7.5	+0.6854	0.5353	+0.1823	+88	+2
10 Ceti	6.4	0.94	7.6	0 28.3	8 9 4.1	+5 52.2	-0.2024	0.5321	0.1824	+24	-48
14 Ceti	5.4	0.90	8.1	-0 55.5	13 35.7	+10 15.6	+1.1124	0.5307	0.1820	+90	+31
33 Ceti	6.1	0.72	8.4	+2 2.4	9 7 32.5	+3 40.4	+1.1438	0.5266	0.1781	+90	+34
f Piscium	5.3	0.68	8.3	3 12.7	11 16.6	+7 17.9	+0.5302	0.5260	0.1768	+70	-6
μ Piscium	5.0	-0.60	-7.9	+5 45.0	17 39.4	-10 30.6	-1.1207	0.5253	+0.1742	-32	-85
v Piscium	4.7	0.55	8.5	5 6.1	23 30.3	-4 50.0	+0.6001	0.5247	0.1715	+77	-1
39 B. Arietis	6.5	0.42	8.4	7 22.1	10 11 38.5	+6 56.8	+0.1545	0.5244	0.1646	+45	-24
64 Ceti	5.8	0.38	8.3	8 12.7	15 1.0	+10 13.4	-0.2210	0.5244	0.1624	+24	-45
ξ^1 Ceti	4.5	0.37	8.2	8 29.3	15 51.8	+11 2.6	-0.3873	0.5244	0.1618	+15	-56
25 Arietis	6.5	-0.30	-8.2	+9 51.6	23 19.3	-5 43.0	-0.7106	0.5248	+0.1565	-4	-80
ξ^2 Ceti	4.3	0.30	8.8	8 7.1	23 43.2	-5 19.8	+1.2712	0.5248	0.1562	+90	+52
389 B. Ceti	6.3	0.29	8.4	9 13.5	11 0 27.1	-4 37.2	+0.1655	0.5249	0.1557	+46	-24
85 Ceti	6.3	0.21	8.3	10 25.0	7 6.2	+1 50.1	-0.1307	0.5256	0.1504	+29	-39
μ Ceti	4.4	0.20	8.6	9 47.5	8 21.9	+3 3.6	+0.7477	0.5258	0.1493	+90	+10
147 B. Arietis	5.8	-0.08	-8.0	+12 53.6	19 22.4	-10 15.6	-1.0874	0.5274	+0.1395	-30	-78
8 B. Tauri	6.2	+0.01	8.6	12 21.5	12 4 27.0	-1 27.2	+0.7294	0.5293	0.1306	+90	+11
f Tauri	4.3	0.04	8.6	12 40.5	7 51.1	+1 50.8	+0.8180	0.5300	0.1270	+90	+18
179 B. Tauri	5.9	0.24	8.6	14 57.5	13 2 19.6	-4 14.4	+0.4479	0.5350	0.1058	+65	-2
48 Tauri	6.3	0.28	8.7	15 12.6	6 20.1	-0 21.4	+0.5838	0.5363	0.1009	+77	+6
γ Tauri	3.9	+0.30	-8.7	+15 26.6	8 19.4	+1 34.3	+0.5234	0.5369	+0.0984	+72	+3
58 Tauri	5.4	0.30	8.9	14 54.7	8 43.9	+1 58.0	+1.1503	0.5370	0.0978	+90	+47
63 Tauri	5.7	0.32	8.4	16 35.9	10 5.8	+3 17.4	-0.5818	0.5375	0.0960	+3	-63
64 Tauri	4.9	0.33	8.1	17 16.0	10 25.4	+3 36.4	-1.2890	0.5376	0.0956	-65	-71
70 Tauri	6.4	0.33	8.7	15 46.0	11 11.8	+4 21.3	+0.4433	0.5378	0.0946	+65	-1
71 Tauri	4.6	+0.33	-8.8	+15 26.7	11 33.4	+4 42.4	+0.8326	0.5379	+0.0941	+90	+22
75 Tauri	5.2	0.34	8.6	16 11.3	12 35.0	+5 42.0	+0.1063	0.5382	0.0928	+42	-19
θ^1 Tauri	4.2	0.34	8.7	15 47.5	12 39.0	+5 45.9	+0.5503	0.5382	0.0927	+74	+5
θ^2 Tauri	3.6	0.34	8.8	15 42.1	12 41.7	+5 48.5	+0.6551	0.5383	0.0926	+86	+11
80 Tauri	5.8	0.35	8.9	15 28.3	13 25.6	+6 31.0	+0.9769	0.5385	0.0916	+90	+32
264 B. Tauri	4.8	+0.35	-8.7	+16 1.6	13 37.5	+6 42.5	+0.3801	0.5385	+0.0914	+60	-5
81 Tauri	5.5	0.35	8.9	15 31.5	13 40.5	+6 45.4	+0.9394	0.5386	0.0914	+90	+29
85 Tauri	6.0	0.36	8.8	15 41.2	14 16.2	+7 20.0	+0.8143	0.5388	0.0905	+90	+21
275 B. Tauri	6.5	0.37	8.7	16 9.8	15 8.2	+8 10.4	+0.3674	0.5390	0.0893	+59	-4
a Tauri(Alde.)	1.1	0.38	8.7	16 21.3	16 15.2	+9 15.2	+0.2533	0.5394	0.0878	+51	-10
89 Tauri	5.8	+0.39	-8.9	+15 52.8	17 21.3	+10 19.4	+0.8743	0.5397	+0.0863	+90	+26
σ^1 Tauri	5.2	0.39	9.0	15 38.9	17 50.8	+10 47.9	+1.1714	0.5399	0.0857	+90	+50
σ^2 Tauri	4.9	0.39	8.9	15 46.0	17 54.2	+10 51.2	+1.0468	0.5400	0.0856	+90	+38
318 B. Tauri	5.7	0.48	8.8	17 2.0	14 2 41.8	-4 37.8	+0.3469	0.5429	0.0733	+58	-4
m Tauri	5.0	0.54	8.5	18 32.5	7 31.0	+0 2.2	-0.9787	0.5446	0.0662	-24	-72
111 Tauri	5.1	+0.60	-9.2	+17 18.7	15 40.9	+7 56.5	+0.8660	0.5473	+0.0540	+90	+28
115 Tauri	5.3	0.62	9.1	17 53.7	16 59.5	+9 12.6	+0.2932	0.5478	0.0519	+54	-4
117 Tauri	6.0	0.61	9.3	17 10.4	17 24.6	+9 36.9	+1.1075	0.5479	0.0513	+90	+48
119 Tauri	4.9	0.64	9.0	18 32.2	19 22.8	+11 31.2	-0.2908	0.5486	0.0482	+19	-37
120 Tauri	5.6	0.64	9.0	18 29.1	20 0.4	-11 52.4	-0.2042	0.5488	0.0472	+24	-32
130 Tauri	5.6	+0.70	-9.5	+17 42.0	15 2 35.7	-5 30.0	+0.9334	0.5511	+0.0368	+90	+35
57 Orionis	5.8	0.74	9.0	19 44.0	6 5.7	-2 6.9	-1.1746	0.5521	0.0311	-43	-71
64 Orionis	5.1	0.77	9.1	19 41.4	10 4.9	+1 44.5	-1.0151	0.5534	0.0246	-27	-71
68 Orionis	5.7	0.80	9.2	19 48.4	14 4.6	+5 36.3	-1.0550	0.5546	0.0180	-31	-71
19 B. Geminorum	6.2	0.80	9.6	18 41.9	14 48.4	+6 18.6	+0.1660	0.5548	0.0167	+46	-8
124 H ¹ . Orionis	5.7	+0.80	-9.8	+17 55.6	15 14.8	+6 44.1	+1.0158	0.5550	+0.0160	+90	+43

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THE STAR'S					AT CONJUNCTION IN R.A.						Limiting Parallels.	
Name.	Mag.	Reductions from 1924.0		Apparent Declina- tion.	Greenwich Mean Time.	Hour Angle, H	Y	z'	y'	N.	S.	
		$\Delta\alpha$	$\Delta\delta$									
71 Orionis	5.1	+0.81	-9.4	+19 10.9	15 15 24.3	+6 53.3	-0.3501	0.5550	+0.0157	+16	-38	
292 B. Orionis	6.5	0.82	9.9	17 47.9	18 28.6	+9 51.5	+1.1974	0.5559	+0.0105	+90	+60	
74 B. Geminorum	6.2	0.91	10.1	18 16.5	16 6 26.4	-2 34.6	+0.6792	0.5592	-0.0099	+90	+21	
110 B. Geminorum	6.2	0.95	10.4	17 51.7	13 19.5	+4 4.6	+1.0140	0.5609	0.0218	+90	+42	
162 B. Geminorum	5.7	1.03	10.8	17 14.8	17 2 41.0	-7 1.2	+1.2225	0.5636	0.0451	+90	+60	
f Geminorum	5.3	+1.05	-10.7	+17 50.8	6 8.8	-3 40.5	+0.4108	0.5641	-0.0511	+63	+2	
g Geminorum	5.0	1.07	10.6	18 41.6	9 8.4	-0 47.0	-0.6585	0.5646	0.0563	-2	-66	
2 B. Cancri	6.0	1.09	11.0	16 43.3	14 45.2	+4 38.2	+1.1067	0.5653	0.0660	+90	+45	
3 Cancri	5.7	1.10	10.9	17 30.9	15 45.8	+5 36.7	+0.1918	0.5655	0.0677	+47	-12	
5 Cancri	5.9	1.10	11.0	16 39.8	16 5.7	+5 55.9	+1.0786	0.5655	0.0683	+90	+43	
ζ Can. (mean)	4.7	+1.12	-10.9	+17 52.5	20 53.6	+10 33.9	-0.5615	0.5660	-0.0764	+4	-59	
δ ^a Cancri	6.2	1.14	11.0	17 17.7	18 3 1.7	-7 30.7	-0.4430	0.5665	0.0866	+11	-51	
90 B. Cancri	6.3	1.15	11.3	15 34.5	7 39.7	-3 2.2	+0.9020	0.5668	0.0942	+90	+32	
54 Cancri	6.3	1.17	11.2	15 37.8	14 20.7	+3 25.0	+0.2353	0.5671	0.1048	+50	-12	
α ¹ Cancri	5.1	1.18	11.2	15 30.7	17 7.8	+6 6.3	-0.0434	0.5672	0.1091	+33	-29	
α ^a Cancri	5.7	+1.18	-11.2	+15 52.3	17 16.7	+6 14.8	-0.3326	0.5672	-0.1094	+17	-46	
81 Cancri	6.4	1.18	11.2	15 18.0	23 54.0	-11 21.6	-0.4880	0.5673	0.1194	+9	-57	
π Cancri	5.6	1.19	11.2	15 15.3	1 11.9	-10 6.3	-0.5962	0.5672	0.1213	+2	-66	
7 Leonis	6.2	1.20	11.1	14 43.0	10 28.0	-1 9.4	-1.2141	0.5671	0.1344	-45	-76	
18 Leonis	5.8	1.21	11.2	12 9.5	15 12.1	+3 25.0	+0.8071	0.5669	0.1407	+90	+16	
19 Leonis	6.4	+1.21	-11.2	+11 55.0	15 40.4	+3 52.3	+0.9912	0.5669	-0.1414	+90	+28	
R Leonis (var.)	4.6	1.21	11.2	11 46.7	15 43.8	+3 55.5	+1.1275	0.5669	0.1414	+90	+40	
ν Leonis	5.0	1.20	11.0	12 48.3	20 30.7	+8 32.6	-0.6325	0.5667	0.1474	+1	-72	
A Leonis	4.6	1.21	11.0	10 22.1	20 53.0	-11 14.2	+1.2447	0.5665	0.1527	+90	+52	
α Leonis (Reg.)	1.3	1.20	10.9	12 20.2	1 5.2	-11 2.3	-0.8311	0.5665	0.1530	-12	-78	
44 Leonis	5.9	+1.21	-10.7	+9 10.1	8 41.4	-3 41.9	+1.2567	0.5662	-0.1614	+90	+52	
45 Leonis	5.8	1.20	10.6	10 8.8	9 45.8	-2 39.7	+0.0698	0.5661	0.1625	+40	-28	
ρ Leonis	3.8	1.20	10.5	9 41.7	12 5.4	-0 24.8	+0.1564	0.5660	0.1649	+45	-23	
49 Leonis	5.7	1.20	10.5	9 2.4	13 5.9	+0 33.6	+0.6662	0.5660	0.1659	+86	+5	
c Leonis	5.1	1.19	9.8	6 30.4	21 0 41.8	+11 45.7	+1.2867	0.5655	0.1763	+88	+55	
χ Leonis	4.7	+1.17	-9.8	+7 44.7	2 37.8	-10 22.3	-0.3281	0.5654	-0.1778	+18	-52	
σ Leonis	4.1	1.16	9.3	6 26.6	9 53.9	-3 21.1	-0.3030	0.5651	0.1829	+19	-52	
b Virginis	5.2	1.10	8.0	4 4.6	3 24.6	-10 26.4	-1.1636	0.5651	0.1913	-36	-86	
10 Virginis	6.2	1.09	7.5	+2 19.4	7 47.8	-6 12.2	-0.2171	0.5653	0.1926	+24	-48	
γ Virg. (mean)	2.9	1.02	5.9	-1 2.1	22 11.1	+7 41.4	+0.4113	0.5662	0.1940	+60	-13	
k Virginis	5.7	+0.99	-4.8	-3 24.2	23 6 12.8	-8 33.5	+1.2599	0.5670	-0.1931	+87	+47	
46 Virginis	6.1	0.98	4.8	2 57.7	6 38.0	-8 9.1	+0.7302	0.5670	0.1930	+88	+4	
48 Virginis	6.5	0.98	4.6	3 15.3	8 6.6	-6 43.6	+0.7437	0.5672	0.1927	+87	+5	
65 Virginis	6.0	0.92	3.7	4 31.7	16 44.5	+1 36.3	+0.3797	0.5685	0.1900	+57	-15	
66 Virginis	5.7	0.92	3.6	4 46.1	17 17.1	+2 7.8	+0.5196	0.5686	0.1898	+67	-7	
l Virginis	4.8	+0.90	-3.0	-5 51.9	20 34.4	+5 18.3	+1.0075	0.5691	-0.1883	+85	+23	
80 Virginis	5.6	0.88	3.1	5 0.6	22 8.8	+6 49.4	-0.1529	0.5694	0.1876	+26	-45	
566 B. Virginis	6.4	0.84	2.8	5 7.0	24 1 51.1	+10 23.8	-0.7356	0.5700	0.1856	-7	-90	
88 Virginis	6.5	0.84	2.3	6 27.6	3 46.8	-11 44.5	+0.2650	0.5704	0.1844	+49	-21	
598 B. Virginis	6.1	0.82	1.7	7 41.2	6 42.7	-8 54.8	+0.9675	0.5711	0.1826	+83	+20	
95 Virginis	5.4	+0.78	-0.9	-8 57.1	11 51.0	-3 57.4	+1.3179	0.5721	-0.1789	+77	+61	
13 Libræ	5.7	0.58	+1.4	11 35.3	25 8 28.5	-8 4.1	+0.4824	0.5773	0.1592	+60	-9	
ξ ^a Libræ	5.6	0.57	1.3	11 6.2	9 30.0	-7 4.8	-0.1707	0.5776	0.1581	+21	-46	
17 Libræ	6.4	0.56	1.3	10 51.0	10 7.6	-6 28.5	-0.5257	0.5778	0.1573	+2	-71	
18 Libræ	5.9	0.55	1.3	10 50.4	10 25.0	-6 11.8	-0.5822	0.5779	0.1570	-1	-76	
130 B. Libræ	5.9	+0.43	+2.4	-12 5.9	21 2.3	+4 2.4	-0.9072	0.5808	-0.1435	-22	-90	

ELEMENTS OF OCCULTATIONS, 1924. 481

FEBRUARY.

THE STAR'S					AT CONJUNCTION IN R.A.							Limiting Parallels.	
Name.	Mag.	Reductions from 1924.0		Apparent Declina- tion.	Greenwich Mean Time.	Hour Angle, <i>H</i>	<i>Y</i>	<i>x'</i>	<i>y'</i>	<i>N.</i>	<i>S.</i>		
		$\Delta\alpha$	$\Delta\delta$										
γ Libræ	4.0	+0.39	+ 3.5	-14 32.2	28 1 56.0	+ 8 45.3	+0.8713	0.5822	-0.1367	+76	+15		
190 B. Libræ	6.5	0.35	3.8	14 48.0	5 15.1	+11 57.1	+0.6925	0.5832	0.1318	+74	+ 3		
η Libræ	5.5	0.35	4.0	15 25.8	5 31.4	-11 47.2	+1.2953	0.5832	0.1314	+74	+61		
195 B. Libræ	6.2	0.30	3.6	13 54.2	8 42.7	- 8 43.0	-0.6607	0.5841	0.1266	- 9	-86		
202 B. Libræ	6.4	0.27	3.8	14 10.6	10 37.8	- 6 52.2	-0.6255	0.5846	0.1236	- 7	-82		
203 B. Libræ	6.2	+0.27	+ 4.0	-14 36.4	10 45.4	- 6 44.8	-0.2055	0.5847	-0.1234	+16	-48		
48 Libræ	4.6	0.26	3.8	14 3.6	11 26.9	- 6 4.8	-0.8435	0.5848	0.1223	-20	-90		
91 B. Scorpïi	6.1	0.16	4.3	14 39.5	18 47.7	+ 0 59.5	-1.0935	0.5867	0.1104	-40	-90		
98 B. Scorpïi	6.1	0.14	4.4	14 41.3	20 6.2	+ 2 15.1	-1.2068	0.5870	0.1081	-53	-90		
φ Ophiuchi	4.4	0.08	5.2	16 26.8	27 1 6.0	+ 7 3.6	+0.0560	0.5883	0.0995	+28	-33		
24 Scorpïi	5.0	+0.02	+ 5.7	-17 35.7	5 23.1	+11 11.0	+0.8102	0.5892	-0.0918	+73	+11		
78 B. Ophiuchi	6.5	-0.06	5.5	16 41.1	11 19.8	- 7 5.7	-0.6258	0.5904	0.0808	-11	-83		
90 B. Ophiuchi	6.5	0.08	6.0	18 7.8	12 50.0	- 5 39.0	+0.7211	0.5907	0.0780	+72	+ 6		
125 B. Ophiuchi	6.2	0.13	5.0	17 30.5	16 19.4	- 2 17.6	-0.1704	0.5912	0.0713	+13	-46		
164 B. Ophiuchi	6.0	0.20	6.0	17 40.6	21 4.5	+ 2 16.7	-0.3168	0.5919	0.0621	+ 4	-56		
192 B. Ophiuchi	6.3	-0.23	+ 6.2	-18 22.5	22 59.6	+ 4 7.4	+0.2772	0.5921	-0.0583	+37	-20		
305 B. Ophiuchi	6.3	0.41	6.2	18 47.3	28 11 43.6	- 7 37.7	+0.1184	0.5931	0.0327	+25	-29		
39 G. Sagittarii	6.3	0.50	6.5	19 51.4	17 56.8	- 1 38.8	+1.0442	0.5932	0.0199	+71	+30		
64 B. Sagittarii	6.1	0.52	6.0	18 41.1	19 41.9	+ 0 2.3	-0.1827	0.5932	0.0163	+ 7	-47		
52 G. Sagittarii	6.4	0.53	6.0	18 29.4	20 30.0	+ 0 48.6	-0.3930	0.5932	0.0147	- 5	-61		
17 H ¹ . Sagittarii	6.4	-0.54	+ 6.0	-18 38.0	21 0.3	+ 1 17.8	-0.2390	0.5931	-0.0136	+ 3	-50		
<i>Y</i> Sagit. (var.)	5.4	0.55	6.0	18 53.6	22 5.1	+ 2 20.0	-0.0025	0.5931	0.0114	+16	-36		
85 B. Sagittarii	6.0	0.58	5.6	17 50.8	29 0 46.2	+ 4 54.9	-1.0952	0.5931	0.0058	-49	-90		
95 B. Sagittarii	5.7	0.60	5.9	18 46.6	1 40.5	+ 5 47.2	-0.1497	0.5929	0.0040	+ 7	-45		
100 B. Sagittarii	5.0	0.60	5.8	18 27.3	2 11.2	+ 6 16.7	-0.4803	0.5928	-0.0029	-10	-68		
171 B. Sagittarii	6.1	-0.78	+ 5.4	-19 21.3	15 6.1	- 5 17.9	+0.5746	0.5912	+0.0235	+55	- 3		
173 B. Sagittarii	6.4	0.78	5.4	19 12.7	15 7.5	- 5 16.5	+0.4285	0.5912	0.0235	+43	-12		
187 B. Sagittarii	6.4	0.79	5.2	18 51.3	16 46.9	+ 3 40.9	+0.1046	0.5909	0.0209	+24	-30		
190 B. Sagittarii	5.4	0.80	5.3	19 24.5	17 14.5	- 3 14.4	+0.6848	0.5908	0.0278	+66	+ 4		
195 B. Sagittarii	6.3	0.81	5.4	19 55.4	17 51.6	- 2 38.7	+1.2292	0.5907	0.0291	+71	+52		
<i>d</i> Sagittarii	5.0	-0.84	+ 5.0	-19 5.3	21 5.8	+ 0 28.2	+0.4783	0.5901	+0.0356	+48	- 9		
226 B. Sagittarii	6.4	0.87	5.0	19 22.6	22 44.2	+ 2 2.8	+0.8350	0.5897	0.0388	+71	+13		
<i>e</i> Sagittarii	4.0	0.86	4.6	17 59.4	22 46.6	+ 2 5.1	-0.5855	0.5897	0.0389	-13	-78		
45 Sagittarii	6.0	-0.86	+ 4.7	-18 26.9	22 50.3	+ 2 8.8	-0.1125	0.5897	+0.0390	+13	-43		

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266 B. Sagittarii	6.1	-0.94	+ 4.4	-19 1.2	1 4 52.3	+ 7 57.1	+0.7461	0.5882	+0.0508	+71	+ 7
267 B. Sagittarii	5.8	0.93	4.3	18 24.0	5 8.3	+ 8 12.5	+0.1216	0.5881	0.0513	+27	-29
31 B. Capricorni	6.4	1.11	1.9	15 59.6	2 254.2	+ 5 10.3	-0.8041	0.5806	0.0910	-21	-90
47 B. Capricorni	6.2	-1.14	+ 1.9	-16 47.2	5 48.3	+ 7 58.1	+0.2883	0.5795	+0.0958	+42	-20
τ Capricorni	5.2	1.14	1.4	15 13.3	7 25.7	+ 9 31.9	-1.1750	0.5788	0.0985	-49	-90
61 B. Capricorni	5.9	1.15	1.6	16 23.7	7 57.9	+10 2.9	+0.0929	0.5786	0.0994	+30	-31
94 B. Capricorni	5.7	1.20	0.9	16 19.5	15 22.4	- 6 48.5	+0.8006	0.5754	0.1110	+74	+10
95 B. Capricorni	5.9	1.19	+ 0.6	14 46.6	15 50.2	- 6 21.7	-0.7539	0.5752	0.1118	-16	-90
29 Capricorni	5.5	-1.24	0.0	-15 29.3	23 17.8	+ 0 50.1	+0.8602	0.5718	+0.1227	+75	+14
53 B. Aquarii	6.5	1.22	- 0.3	13 31.1	23 25.5	+ 0 57.5	-1.1747	0.5717	0.1228	-47	-90
18 Aquarii	5.5	1.23	0.7	-13 12.3	3 3 3.0	+ 4 27.4	-1.0475	0.5701	0.1278	-34	-90

NEW MOON.

33 Ceti	6.1	-0.98	- 9.2	+ 2 2.3	7 16 12.2	- 9 52.0	+1.1535	0.5299	+0.1794	+90	+35
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482 ELEMENTS OF OCCULTATIONS, 1924.

MARCH.

THE STAR'S					AT CONJUNCTION IN R.A.					Limiting Parallels.	
Name.	Mag.	Reductions from 1924.0		Apparent Declina- tion.	Greenwich Mean Time.	Hour Angle, H	γ	α'	γ'	N.	S.
		$\Delta\alpha$	$\Delta\delta$		d h m	h m					
<i>f</i> Piscium	5.3	-0.95	-9.3	+ 3 12.7	7 19 54.5	- 6 16.4	+0.5411	0.5294	+0.1781	+71	- 6
μ Piscium	5.0	0.89	9.1	5 45.0	8 2 14.3	- 0 7.9	-1.1061	0.5288	0.1756	-31	-85
ν Piscium	4.7	0.87	9.5	5 6.1	8 2.4	+ 5 29.8	+0.6132	0.5282	0.1728	+79	0
39 B. Arietis	6.5	0.78	9.6	7 22.1	20 4.6	- 6 49.3	+0.1710	0.5278	0.1658	+46	-23
64 Ceti	5.8	0.75	9.5	8 12.7	23 25.4	- 3 34.5	-0.2032	0.5278	0.1636	+25	-44
ξ^1 Ceti	4.5	-0.74	-9.5	+ 8 29.3	9 0 15.9	- 2 45.5	-0.3690	0.5278	+0.1630	+16	-55
25 Arietis	6.5	0.69	9.5	9 51.6	7 39.9	+ 4 25.5	-0.6901	0.5279	0.1577	- 3	-79
ξ^2 Ceti	4.3	0.69	9.9	8 7.0	8 3.7	+ 4 48.5	+1.2890	0.5279	0.1573	+88	+56
389 B. Ceti	6.3	0.68	9.6	9 13.5	8 47.2	+ 5 30.7	+0.1849	0.5280	0.1568	+47	-23
85 Ceti	6.3	0.63	9.6	10 25.0	15 23.6	+11 55.3	-0.1092	0.5284	0.1514	+30	-38
μ Ceti	4.4	-0.62	-9.8	+ 9 47.5	16 38.8	-10 51.7	+0.7684	0.5285	+0.1503	+90	+11
147 B. Arietis	5.8	0.52	9.3	12 53.5	10 3 35.5	- 0 14.6	-1.0624	0.5296	0.1404	-28	-78
8 B. Tauri	6.2	0.45	9.7	12 21.5	12 37.9	+ 8 31.5	+0.7556	0.5308	0.1312	+90	+13
<i>f</i> Tauri	4.3	0.42	9.7	12 40.5	16 1.4	+11 48.8	+0.8450	0.5314	0.1276	+90	+19
179 B. Tauri	5.9	0.25	9.5	14 57.5	11 10 29.2	+ 5 43.0	+0.4794	0.5350	0.1060	+68	0
48 Tauri	6.3	-0.21	-9.5	+15 12.5	14 30.0	+ 9 36.4	+0.6165	0.5358	+0.1009	+81	+ 8
γ Tauri	3.9	0.19	9.5	15 26.6	16 29.6	+11 32.3	+0.5564	0.5363	0.0984	+75	+ 5
58 Tauri	5.4	0.19	9.6	14 54.7	16 54.2	+11 56.2	+1.1844	0.5364	0.0979	+90	+50
63 Tauri	5.7	0.17	9.1	16 35.9	18 16.4	-10 44.2	-0.5502	0.5367	0.0961	+ 5	-60
64 Tauri	4.9	0.16	8.9	17 16.0	18 36.0	-10 25.1	-1.2587	0.5367	0.0957	-55	-73
70 Tauri	6.4	-0.17	-9.4	+15 46.0	19 22.6	- 9 40.1	+0.4767	0.5369	+0.0946	+67	+ 1
71 Tauri	4.6	0.16	9.5	15 26.7	19 44.3	- 9 19.0	+0.8669	0.5370	0.0942	+90	+24
75 Tauri	5.2	0.15	9.3	16 11.3	20 46.0	- 8 19.2	+0.1395	0.5373	0.0928	+44	-18
θ^1 Tauri	4.2	0.15	9.4	15 47.5	20 50.1	- 8 15.2	+0.5843	0.5373	0.0927	+77	+ 7
θ^2 Tauri	3.6	0.15	9.5	15 42.1	20 52.8	- 8 12.6	+0.6894	0.5373	0.0926	+90	+13
80 Tauri	5.8	-0.15	-9.6	+15 28.2	21 36.8	- 7 29.9	+1.0119	0.5375	+0.0917	+90	+34
264 B. Tauri	4.8	0.14	9.4	16 1.6	21 48.8	- 7 18.3	+0.4140	0.5375	0.0914	+63	- 3
81 Tauri	5.5	0.14	9.6	15 31.5	21 51.8	- 7 15.4	+0.9745	0.5375	0.0913	+90	+31
85 Tauri	6.0	0.14	9.5	15 41.2	22 27.6	- 6 40.7	+0.8493	0.5377	0.0905	+90	+23
275 B. Tauri	6.5	0.13	9.4	16 9.7	23 19.8	- 5 50.2	+0.4016	0.5379	0.0893	+62	- 2
α Tauri (<i>Alde.</i>)	1.1	-0.12	-9.4	+16 21.3	12 0 27.1	- 4 45.0	+0.2875	0.5382	+0.0878	+54	- 8
89 Tauri	5.8	0.11	9.5	15 52.8	1 33.5	- 3 40.6	+0.9101	0.5384	0.0863	+90	+28
σ^1 Tauri	5.2	0.10	9.6	15 38.9	2 3.2	- 3 11.9	+1.2079	0.5386	0.0856	+90	+54
σ^2 Tauri	4.9	0.10	9.6	15 46.0	2 6.6	- 3 8.6	+1.0832	0.5386	0.0856	+90	+41
318 B. Tauri	5.7	-0.02	9.3	17 2.0	10 57.2	+ 5 25.4	+0.3833	0.5408	0.0731	+60	- 2
<i>m</i> Tauri	5.0	+0.04	-8.9	+18 32.5	15 48.5	+10 7.5	-0.9458	0.5420	+0.0661	-21	-72
111 Tauri	5.1	0.12	9.4	17 18.7	13 0 2.5	- 5 54.1	+0.9061	0.5442	0.0538	+90	+31
115 Tauri	5.3	0.13	9.2	17 53.7	1 21.8	- 4 37.3	+0.3315	0.5445	0.0518	+57	- 2
117 Tauri	6.0	0.13	9.5	17 10.4	1 47.2	- 4 12.7	+1.1488	0.5446	0.0511	+90	+52
119 Tauri	4.9	0.15	9.1	18 32.2	3 46.6	- 2 17.2	-0.2546	0.5452	0.0480	+21	-35
120 Tauri	5.6	+0.16	-9.1	+18 29.1	4 24.5	- 1 40.5	-0.1676	0.5453	+0.0471	+26	-30
130 Tauri	5.6	0.22	9.5	17 42.0	11 4.0	+ 4 46.2	+0.9754	0.5471	0.0366	+90	+38
57 Orionis	5.8	0.26	8.8	19 44.0	14 36.4	+ 8 11.8	-1.1416	0.5480	0.0310	-39	-71
64 Orionis	5.1	0.30	8.9	19 41.4	18 38.5	-11 54.0	-0.9813	0.5490	0.0244	-24	-71
68 Orionis	5.7	0.34	8.9	19 48.4	22 41.2	- 7 59.2	-1.0214	0.5500	0.0178	-27	-71
19 B. Geminorum	6.2	+0.34	-9.3	+18 41.9	23 25.6	- 7 16.3	+0.2054	0.5502	+0.0166	+48	- 6
124 H ¹ . Orionis	5.7	0.34	9.6	17 55.6	23 52.4	- 6 50.3	+1.0591	0.5503	0.0159	+90	+46
71 Orionis	5.1	0.35	9.2	19 10.9	14 0 1.9	- 6 41.2	-0.3132	0.5504	0.0156	+18	-36
292 B. Orionis	6.5	0.38	9.7	17 47.9	3 8.7	- 3 40.5	+1.2417	0.5511	+0.0105	+86	+65
74 B. Geminorum	6.2	0.50	9.6	18 16.5	15 16.4	+ 8 3.2	+0.7210	0.5540	-0.0099	+90	+24
110 B. Geminorum	6.2	+0.56	-9.8	+17 51.7	22 15.4	- 9 11.6	+1.0570	0.5555	-0.0217	+90	+46

ELEMENTS OF OCCULTATIONS, 1924. 483

MARCH.

THE STAR'S					AT CONJUNCTION IN R.A.						Limiting Parallels.	
Name.	Mag.	Reductions from 1924.0		Apparent Declina- tion.	Greenwich Mean Time.	Hour Angle, H	Y	z'	y'	N.	S.	
		Δα	Δδ									
162 B. Geminorum	5.7	+0.68	-10.1	+17 14.8	15 11 48.3	+ 3 54.0	+1.2648	0.5582	-0.0448	+81	+68	
f Geminorum	5.3	0.72	9.9	17 50.8	15 19.0	+ 7 17.6	+0.4487	0.5588	0.0508	+66	+ 4	
g Geminorum	5.0	0.74	9.7	18 41.6	18 21.1	+10 13.6	-0.6258	0.5594	0.0560	0	-63	
2 B. Cancri	6.0	0.79	10.3	16 43.3	16 0 2.4	- 8 16.6	+1.1458	0.5602	0.0656	+90	+49	
3 Cancri	5.7	0.80	10.1	17 30.9	1 3.8	- 7 17.2	+0.2269	0.5604	0.0673	+50	-10	
5 Cancri	5.9	+0.80	-10.3	+16 39.8	1 24.0	- 6 57.8	+1.1171	0.5604	-0.0678	+90	+46	
ζ Can. (mean)	4.7	0.84	10.0	17 52.5	6 15.5	- 2 16.2	-0.5303	0.5612	0.0759	+ 6	-56	
d ² Cancri	6.2	0.89	10.1	17 17.7	12 27.9	+ 3 43.6	-0.4127	0.5620	0.0862	+13	-49	
90 B. Cancri	6.3	0.93	10.6	15 34.5	17 8.8	+ 8 14.9	+0.9950	0.5625	0.0938	+90	+34	
54 Cancri	6.3	0.98	10.5	15 37.8	23 53.7	- 9 14.0	+0.2641	0.5633	0.1044	+52	-11	
o ¹ Cancri	5.1	+1.00	-10.5	+15 36.7	17 2 42.1	- 6 31.4	-0.0161	0.5636	-0.1087	+35	-27	
o ² Cancri	5.7	1.00	10.4	15 52.3	2 51.1	- 6 22.7	-0.3058	0.5636	0.1090	+19	-44	
81 Cancri	6.4	1.04	10.4	15 18.0	9 31.3	+ 0 3.8	-0.4637	0.5642	0.1191	+10	-56	
π Cancri	5.6	1.05	10.4	15 15.3	10 49.7	+ 1 19.5	-0.5724	0.5643	0.1211	+ 4	-64	
7 Leonis	6.2	1.11	10.5	14 43.0	20 8.3	+10 18.9	-1.1932	0.5651	0.1344	-42	-76	
11 Leonis	6.5	+1.12	-10.5	+14 41.3	21 6.1	+11 14.8	-1.2934	0.5651	-0.1357	-60	-74	
ψ Leonis	5.6	1.13	10.5	14 22.0	23 40.3	-10 16.3	-1.3090	0.5654	0.1392	-65	-72	
18 Leonis	5.8	1.14	10.9	12 9.5	18 0 53.1	- 9 6.0	+0.8246	0.5654	0.1408	+90	+17	
19 Leonis	6.4	1.15	10.9	11 55.0	1 21.4	- 8 38.7	+1.0082	0.5654	0.1415	+90	+30	
R Leonis (var.)	4.6	1.15	11.0	11 46.7	1 24.8	- 8 35.4	+1.1443	0.5655	0.1416	+90	+41	
ν Leonis	5.0	+1.17	-10.6	+12 48.3	6 12.0	- 3 58.1	-0.6157	0.5658	-0.1477	+ 2	-71	
A Leonis	4.6	1.20	11.0	10 22.1	10 34.0	+ 0 14.9	+1.2552	0.5661	0.1531	+90	+53	
a Leonis (Reg.)	1.3	1.19	10.6	12 20.2	10 46.2	+ 0 26.8	-0.8157	0.5661	0.1533	-11	-78	
44 Leonis	5.9	1.24	10.9	9 10.1	18 21.0	+ 7 45.8	+1.2616	0.5667	0.1621	+90	+52	
45 Leonis	5.8	1.24	10.7	10 8.8	19 25.1	+ 8 47.7	+0.0780	0.5668	0.1632	+40	-27	
ρ Leonis	3.8	+1.25	-10.7	+ 9 41.7	21 44.0	+11 1.9	+0.1629	0.5669	-0.1658	+45	-23	
49 Leonis	5.7	1.26	10.7	9 2.4	22 44.1	+11 59.7	+0.6699	0.5670	0.1668	+86	+ 5	
c Leonis	5.1	1.31	10.5	6 30.4	19 10 14.4	- 0 53.7	+1.2784	0.5679	0.1777	+90	+54	
χ Leonis	4.7	1.30	10.3	7 44.7	12 9.1	+ 0 57.0	-0.3278	0.5681	0.1793	+18	-53	
σ Leonis	4.1	1.33	10.0	6 26.6	19 19.8	+ 7 52.8	-0.3073	0.5688	0.1848	+19	-52	
b Virginis	5.2	+1.37	- 9.2	+ 4 4.6	20 12 33.0	+ 0 30.0	-1.1710	0.5708	-0.1940	-37	-86	
10 Virginis	6.2	1.39	9.0	+ 2 19.3	16 50.9	+ 4 38.9	-0.2369	0.5714	0.1954	+23	-49	
γ Virg. (mean)	2.9	1.40	7.9	- 1 2.1	21 6 54.3	- 5 47.5	+0.3737	0.5737	0.1973	+58	-15	
k Virginis	5.7	1.41	7.1	3 24.3	14 43.5	+ 1 45.0	+1.2054	0.5752	0.1966	+87	+40	
46 Virginis	6.1	1.40	7.1	2 57.7	15 8.0	+ 2 8.7	+0.6821	0.5753	0.1965	+83	+ 2	
48 Virginis	6.5	+1.40	- 6.9	- 3 15.4	16 34.2	+ 3 31.8	+0.6943	0.5755	-0.1963	+86	+ 2	
65 Virginis	6.0	1.39	6.1	4 31.7	22 0 57.7	+11 37.3	+0.3284	0.5774	0.1937	+55	-18	
66 Virginis	5.7	1.39	6.0	4 46.1	1 29.3	-11 52.3	+0.4661	0.5775	0.1935	+64	-10	
72 Virginis	6.1	1.40	5.6	6 4.8	4 0.9	- 9 26.1	+1.2875	0.5781	0.1924	+84	+52	
l Virginis	4.8	1.39	5.6	5 51.9	4 40.9	- 8 47.5	+0.9449	0.5782	0.1921	+85	+19	
80 Virginis	5.6	+1.38	- 5.5	- 5 0.7	6 12.6	- 7 19.2	-0.2008	0.5785	-0.1914	+23	-48	
566 B. Virginis	6.4	1.36	5.2	5 7.1	9 48.2	- 5 51.4	-0.7780	0.5794	0.1893	- 9	-90	
88 Virginis	6.5	1.37	4.9	6 27.6	11 40.5	- 2 3.1	+0.2075	0.5798	0.1882	+46	-24	
598 B. Virginis	6.1	1.36	4.4	7 41.2	14 31.1	+ 0 41.3	+0.8981	0.5805	0.1863	+83	+15	
95 Virginis	5.4	1.35	3.8	8 57.1	19 30.0	+ 5 29.3	+1.2401	0.5818	0.1826	+81	+46	
13 Libræ	5.7	+1.24	- 1.3	-11 35.4	23 15 29.8	+ 0 44.8	+0.4038	0.5868	-0.1625	+55	-14	
ζ ² Libræ	5.6	1.23	1.3	11 6.3	16 29.5	+ 1 42.3	-0.2409	0.5870	0.1613	+17	-50	
17 Libræ	6.4	1.22	1.3	10 51.0	17 6.0	+ 2 17.5	-0.5914	0.5872	0.1605	- 2	-77	
18 Libræ	5.9	1.22	1.4	10 50.4	17 22.9	+ 2 33.8	-0.6474	0.5873	0.1602	- 5	-84	
130 B. Libræ	5.9	1.14	- 0.1	12 6.0	24 3 41.7	-11 30.7	-0.9740	0.5898	0.1463	-27	-90	
γ Libræ	4.0	+1.12	+ 1.0	-14 32.2	8 27.3	- 6 55.9	+0.7796	0.5909	-0.1392	+76	+ 9	

484 ELEMENTS OF OCCULTATIONS, 1924.

MARCH.

THE STAR'S					AT CONJUNCTION IN R.A.					Limiting Parallels.	
Name.	Mag.	Reductions from 1924.0		Apparent Declina- tion.	Greenwich Mean Time.	Hour Angle, H	γ	π	γ'	N.	S.
		$\Delta\alpha$	$\Delta\delta$		d h m	h m					
190 B. Libræ	6.5	+1.09	+1.3	-14 46.0	24 11 41.0	- 3 49.6	+0.6017	0.5915	-0.1342	+67	- 2
η Libræ	5.5	1.09	1.5	15 25.9	11 56.9	- 3 34.2	+1.1971	0.5916	0.1338	+75	+43
195 B. Libræ	6.2	1.04	1.4	13 54.3	15 3.2	- 0 35.0	-0.7367	0.5922	0.1288	-14	-90
202 B. Libræ	6.4	1.03	1.6	14 10.6	16 55.4	+ 1 12.9	-0.7029	0.5926	0.1257	-12	-90
203 B. Libræ	6.2	1.03	1.7	14 36.4	17 2.8	+ 1 20.0	-0.2878	0.5926	0.1255	+12	-53
48 Libræ	4.6	+1.02	+1.6	-14 3.6	17 43.2	+ 1 58.9	-0.9188	0.5927	-0.1244	-25	-90
49 Libræ	5.4	1.02	2.3	16 18.6	18 35.3	+ 2 49.0	+1.2239	0.5928	0.1229	+74	+47
91 B. Scorpïi	6.1	0.94	2.3	14 39.5	25 0 53.4	+ 8 52.6	-1.1666	0.5939	0.1120	-47	-90
98 B. Scorpïi	6.1	0.93	2.4	14 41.3	2 10.1	+10 6.5	-1.2823	0.5941	0.1097	-65	-81
φ Ophiuchi	4.4	0.88	3.3	16 26.8	7 3.3	- 9 11.6	-0.0344	0.5948	0.1009	+23	-38
24 Scorpïi	5.0	+0.84	+4.0	-17 35.7	11 15.2	- 5 9.5	+0.7115	0.5952	-0.0930	+72	+ 5
78 B. Ophiuchi	6.5	0.75	4.0	16 41.1	17 5.2	+ 0 27.0	-0.7132	0.5956	0.0818	-16	-90
90 B. Ophiuchi	6.5	0.74	4.6	18 7.8	18 33.9	+ 1 52.3	+0.6222	0.5957	0.0789	+64	0
29 Ophiuchi	6.4	0.73	4.9	18 46.4	19 24.6	+ 2 41.0	+1.2042	0.5958	0.0772	+72	+6
125 B. Ophiuchi	6.2	0.69	4.6	17 30.5	22 0.0	+ 5 10.3	-0.2629	0.5959	0.0721	+ 8	-52
164 B. Ophiuchi	6.0	+0.62	+4.9	-17 40.6	26 2 40.6	+ 9 40.1	-0.4093	0.5959	-0.0627	- 1	-62
192 B. Ophiuchi	6.3	0.60	5.2	18 22.5	4 34.2	+11 29.4	+0.1805	0.5959	0.0588	+31	-26
305 B. Ophiuchi	6.3	0.42	5.8	18 47.3	17 9.9	- 0 24.2	+0.0216	0.5951	0.0328	+19	-35
39 G. Sagittarii	6.3	0.33	6.3	19 51.4	23 20.5	+ 5 32.2	+0.9441	0.5943	0.0199	+71	+21
64 B. Sagittarii	6.1	0.30	5.9	18 41.1	27 1 5.0	+ 7 12.7	-0.2786	0.5941	0.0163	+ 2	-53
52 G. Sagittarii	6.4	+0.29	+5.8	-18 29.4	1 52.9	+ 7 58.8	-0.4884	0.5939	-0.0146	-10	-69
17 H ¹ Sagittarii	6.4	0.28	5.9	18 38.9	2 23.0	+ 8 27.7	-0.3348	0.5938	0.0136	- 2	-57
Y Sagit. (var.)	5.4	0.27	6.0	18 53.6	3 27.5	+ 9 29.8	-0.0991	0.5936	0.0114	+11	-42
85 B. Sagittarii	6.0	0.23	5.7	17 50.8	6 8.0	-11 55.9	-1.1891	0.5931	0.0058	-59	-90
95 B. Sagittarii	5.7	0.22	6.0	18 46.6	7 2.2	-11 3.7	-0.2457	0.5929	0.0039	+ 2	-51
100 B. Sagittarii	5.0	+0.21	+5.9	-18 27.3	7 32.8	-10 34.4	-0.5756	0.5928	-0.0028	-16	-77
171 B. Sagittarii	6.1	0.02	6.1	19 21.3	20 27.7	+ 1 51.1	+0.4798	0.5895	+0.0237	+47	- 9
173 B. Sagittarii	6.4	+0.02	6.1	19 12.7	20 29.1	+ 1 52.4	+0.3337	0.5895	0.0237	+37	-17
187 B. Sagittarii	6.4	0.00	5.9	18 51.3	22 8.8	+ 3 28.3	+0.0099	0.5890	0.0270	+19	-35
190 B. Sagittarii	5.4	-0.01	6.1	19 24.5	22 36.5	+ 3 55.0	+0.5905	0.5888	0.0280	+57	- 2
195 B. Sagittarii	6.3	-0.02	+6.3	-19 55.4	23 13.8	+ 4 30.9	+1.1353	0.5886	+0.0292	+71	+38
d Sagittarii	5.0	0.07	6.0	19 5.3	28 2 28.7	+ 7 38.4	+0.3849	0.5876	0.0356	+41	-14
226 B. Sagittarii	6.4	0.10	6.0	19 22.6	4 7.6	+ 9 13.6	+0.7426	0.5870	0.0389	+71	+ 7
g Sagittarii	4.0	0.09	5.5	17 59.4	4 10.0	+ 9 15.9	-0.6797	0.5870	0.0390	-18	-90
45 Sagittarii	6.0	0.09	5.7	18 26.9	4 13.8	+ 9 19.6	-0.2060	0.5870	0.0391	+ 8	-48
266 B. Sagittarii	6.1	-0.18	+5.7	-19 1.2	10 18.1	- 8 49.7	+0.6558	0.5847	+0.0509	+65	+ 2
267 B. Sagittarii	5.8	0.18	5.5	18 24.0	10 34.2	- 8 34.2	+0.0301	0.5847	0.0514	+22	-34
57 Sagittarii	6.0	0.27	5.5	19 14.3	16 55.5	- 2 27.0	+1.2606	0.5822	0.0632	+71	+58
31 B. Capricorni	6.4	0.45	3.7	15 59.6	29 8 34.2	-11 22.0	-0.8915	0.5754	0.0907	-27	-90
g Capricorni	5.0	0.47	4.4	18 3.9	8 36.3	-11 20.4	+1.2648	0.5753	0.0908	+72	+57
47 B. Capricorni	6.2	-0.49	+3.8	-16 47.2	11 30.7	- 8 32.2	+0.2077	0.5740	+0.0955	+36	-24
τ Capricorni	5.2	0.50	3.2	15 13.3	13 9.5	- 6 56.9	-1.2624	0.5732	0.0982	- 61	-86
61 B. Capricorni	5.9	0.52	3.6	16 23.7	13 42.1	- 6 25.5	+0.0124	0.5730	0.0990	+26	-35
94 B. Capricorni	5.7	0.60	3.1	16 19.4	21 13.5	+ 0 50.0	+0.7287	0.5694	0.1106	+74	+ 6
95 B. Capricorni	5.9	0.59	2.6	14 46.6	21 41.8	+ 1 17.3	-0.8348	0.5692	0.1113	-21	-90
29 Capricorni	5.5	-0.68	+2.3	-15 29.3	30 5 16.9	+ 8 36.7	+0.7941	0.5655	+0.1220	+75	+10
53 B. Aquarii	6.5	0.66	1.7	13 31.1	5 24.7	+ 8 44.2	-1.2539	0.5655	0.1222	-57	-89
18 Aquarii	5.5	0.69	1.3	13 12.3	9 6.0	-11 42.1	-1.1236	0.5637	0.1272	-40	-90
42 Capricorni	5.1	0.78	1.0	14 23.2	16 59.5	- 4 4.7	+1.1614	0.5600	0.1370	+76	+38
151 B. Capricorni	6.1	0.80	+0.5	13 4.7	20 44.1	- 0 27.7	+0.3047	0.5582	0.1414	+47	-19
e Aquarii	5.4	-0.86	-0.6	-11 56.4	31 6 28.6	+ 8 57.5	+0.5326	0.5537	+0.1517	+64	- 6

ELEMENTS OF OCCULTATIONS, 1924. 485

MARCH.

THE STAR'S					AT CONJUNCTION IN R.A.					Limiting Parallels.	
Name.	Mag.	Reductions from 1924.0		Apparent Declina- tion.	Greenwich Mean Time.	Hour Angle, H	P	x'	y'	N.	S.
		$\Delta\alpha$	$\Delta\delta$								
σ Aquarii	4.9	-0.92	-1.5	-11° 4.1'	31 15 56.5	+ 5 53.2	+1.0891	0.5496	+0.1603	+79	+30
167 G. Aquarii	6.3	0.91	2.4	8 17.6	19 38.3	- 2 18.6	-1.2602	0.5481	0.1632	-51	-90
213 B. Aquarii	6.5	-0.93	-2.5	-8 42.6	21 53.3	- 0 7.9	-0.4485	0.5472	+0.1650	+ 8	-64

APRIL.

λ Aquarii	3.8	-0.95	-3.0	-7 59.1	1 23 0.0	+ 4 20.1	-0.4529	0.5454	+0.1682	+ 8	-65
78 Aquarii	6.3	0.95	3.1	7 36.6	3 26.9	+ 5 15.2	-0.6934	0.5450	0.1689	+ 5	-89
81 Aquarii	6.4	0.96	3.4	7 28.2	6 45.8	+ 8 27.8	-0.2793	0.5438	0.1710	+18	-53
82 Aquarii	6.4	0.96	3.5	6 59.0	7 19.4	+ 9 0.3	-0.7034	0.5437	0.1713	- 5	-90
h Aquarii	5.4	-0.98	-3.4	-8 6.3	8 35.4	+10 14.0	+0.7121	0.5432	+0.1721	+82	+ 4
φ Aquarii	4.4	0.98	4.1	6 27.6	13 5.0	- 9 24.9	-0.2674	0.5416	0.1745	+19	-52
96 Aquarii	5.7	0.98	4.4	5 32.5	15 34.5	- 7 0.0	-0.8152	0.5407	0.1758	-12	-90
317 B. Aquarii	6.3	1.00	4.3	6 19.5	16 13.0	- 6 22.7	+0.1368	0.5405	0.1761	+42	-28
URANUS	6.3	..	..	- 5 4.4	17 59.1	- 4 39.9	-0.8928	0.5378	0.1760	-17	-90

NEW MOON.

85 Ceti	6.3	-0.87	-10.1	+10 25.0	5 23 1.3	- 2 39.3	-0.0021	0.5299	+0.1530	+36	-32
μ Ceti	4.4	0.87	10.2	9 47.5	6 01 6.4	- 1 26.4	+0.8781	0.5300	0.1519	+90	+18
147 B. Arietis	5.8	0.82	10.0	12 53.5	11 11.6	+ 9 9.2	-0.9434	0.5313	0.1419	-19	-78
8 B. Tauri	6.2	-0.78	-10.3	+12 21.5	20 12.7	- 6 6.0	+0.8859	0.5325	+0.1326	+90	+21
f Tauri	4.3	0.76	10.3	12 40.5	23 35.8	- 2 49.0	+0.9786	0.5330	0.1290	+90	+27
179 B. Tauri	5.9	0.65	10.1	14 57.4	7 18 1.6	- 8 56.9	+0.6288	0.5362	0.1071	+82	+ 8
48 Tauri	6.3	0.62	10.1	15 12.5	22 2.2	- 5 3.7	+0.7694	0.5369	0.1020	+90	+17
γ Tauri	3.9	0.61	10.0	15 26.6	8 0 1.8	- 3 7.9	+0.7107	0.5373	0.0994	+90	+14
63 Tauri	5.7	-0.60	- 9.8	+16 35.9	1 48.5	- 1 24.3	-0.3972	0.5376	+0.0970	+14	-49
64 Tauri	4.9	0.60	9.6	17 16.0	2 8.1	- 1 5.3	-1.1071	0.5377	0.0966	-34	-73
70 Tauri	6.4	0.59	10.0	15 45.9	2 54.7	- 0 20.2	+0.6330	0.5378	0.0956	+83	+10
71 Tauri	4.6	0.59	10.1	15 26.7	3 16.4	+ 0 0.8	+1.0243	0.5379	0.0951	+90	+35
75 Tauri	5.2	0.58	9.9	16 11.3	4 18.1	+ 1 0.6	+0.2958	0.5381	0.0938	+54	- 9
θ^1 Tauri	4.2	-0.58	-10.0	+15 47.5	4 22.2	+ 1 4.6	+0.7419	0.5381	+0.0936	+90	+16
θ^2 Tauri	3.6	0.58	10.0	15 42.0	4 24.9	+ 1 7.2	+0.8473	0.5381	0.0935	+90	+23
80 Tauri	5.8	0.58	10.1	15 28.2	5 9.0	+ 1 49.9	+1.1712	0.5382	0.0925	+90	+49
264 B. Tauri	4.8	0.57	9.9	16 1.6	5 20.9	+ 2 1.5	+0.5719	0.5383	0.0923	+76	+ 6
81 Tauri	5.5	0.57	10.1	15 31.5	5 23.9	+ 2 4.4	+1.1339	0.5383	0.0922	+90	+45
85 Tauri	6.0	-0.57	-10.0	+15 41.2	5 59.7	+ 2 39.1	+1.0087	0.5384	+0.0914	+90	+34
275 B. Tauri	6.5	0.57	9.9	16 9.7	6 52.0	+ 3 29.7	+0.5605	0.5386	0.0902	+75	+ 5
α Tauri (Ald.)	1.1	0.56	9.9	16 21.3	7 59.3	+ 4 35.0	+0.4469	0.5388	0.0887	+65	0
89 Tauri	5.8	0.55	10.0	15 52.8	9 5.8	+ 5 39.4	+1.0719	0.5390	0.0871	+90	+40
σ^2 Tauri	4.9	0.54	10.0	15 46.0	9 38.9	+ 6 11.5	+1.2459	0.5391	0.0864	+89	+60
318 B. Tauri	5.7	-0.48	- 9.7	+17 2.0	18 30.4	- 9 13.6	+0.5497	0.5408	+0.0738	+74	+ 7
m Tauri	5.0	0.43	9.3	18 32.5	23 22.6	- 4 30.6	-0.7814	0.5417	0.0667	-10	-72
111 Tauri	5.1	0.37	9.7	17 18.7	9 738.7	+ 3 29.8	+1.0819	0.5433	0.0542	+90	+44
115 Tauri	5.3	0.36	9.5	17 53.7	8 58.5	+ 4 47.1	+0.5054	0.5435	0.0522	+70	+ 7
119 Tauri	4.9	0.34	9.3	18 32.2	11 24.0	+ 7 7.9	-0.0822	0.5439	0.0484	+31	-25
120 Tauri	5.6	-0.34	- 9.3	+18 29.1	12 2.2	+ 7 44.9	+0.0055	0.5441	+0.0474	+36	-20
130 Tauri	5.6	0.28	9.5	17 42.0	18 44.5	- 9 45.6	+1.1567	0.5452	0.0369	+90	+53
B. D. + 19° 1110	6.0	0.26	8.8	19 50.8	21 5.0	- 7 29.6	-1.1353	0.5457	0.0332	-38	-71
57 Orionis	5.8	0.25	8.8	19 44.0	22 18.5	- 6 18.4	-0.9704	0.5459	0.0312	-23	-71
64 Orionis	5.1	0.22	8.8	19 41.4	10 2 22.8	- 2 22.0	-0.8084	0.5466	0.0247	-12	-71
68 Orionis	5.7	-0.18	- 8.8	+19 48.4	6 27.8	+ 1 35.2	-0.8479	0.5472	+0.0180	-14	-71

486 ELEMENTS OF OCCULTATIONS, 1924.

APRIL.

THE STAR'S					AT CONJUNCTION IN R.A.					Limiting Parallels.	
Name.	Mag.	Reductions from 1924.0		Apparent Declina- tion.	Greenwich Mean Time.	Hour Angle, H	Y	x'	y'	N.	S.
		$\Delta\alpha$	$\Delta\delta$								
19 B. Geminorum	6.2	-0.17	-9.1	+18 41.9	10 7 12.6	+ 2 18.5	+0.3864	0.5474	+0.0168	+0.1	+ 4
124 H ¹ . Orionis	5.7	0.17	9.4	17 55.6	7 39.7	+ 2 44.8	+1.2455	0.5474	0.0161	+86	+66
71 Orionis	5.1	0.17	9.0	19 10.9	7 49.4	+ 2 54.1	-0.1352	0.5474	0.0158	+28	-25
v Geminorum	4.1	0.10	8.6	20 15.6	14 30.4	+ 9 22.2	-1.2524	0.5485	+0.0048	-57	-70
74 B. Geminorum	6.2	-0.02	9.2	18 16.5	23 15.1	- 6 10.3	+0.9082	0.5498	-0.0097	+90	+36
110 B. Geminorum	6.2	+0.05	-9.2	+17 51.7	11 6 20.3	+ 0 41.0	+1.2472	0.5507	-0.0215	+85	+66
f Geminorum	5.3	0.23	9.0	17 50.8	23 41.7	- 6 31.8	+0.6323	0.5527	0.0505	+84	+15
g Geminorum	5.0	0.26	8.6	18 41.7	12 2 47.3	- 3 32.3	-0.4525	0.5531	0.0556	+10	-49
3 Cancri	5.7	0.33	8.9	17 30.9	9 37.9	+ 3 4.7	+0.4056	0.5537	0.0668	+62	0
ζ Can. (mean)	4.7	0.38	8.8	17 52.5	14 56.1	+ 8 12.2	-0.3607	0.5543	0.0754	+15	-45
d ² Cancri	6.2	+0.44	-8.8	+17 17.7	21 16.4	- 9 40.0	-0.2450	0.5548	-0.0855	+22	-38
90 B. Cancri	6.3	0.50	9.3	15 34.5	13 2 3.4	- 5 2.6	+1.1732	0.5552	0.0931	+90	+49
54 Cancri	6.3	0.57	9.1	15 37.9	8 57.1	+ 1 37.4	+0.4311	0.5559	0.1037	+64	- 3
o ¹ Cancri	5.1	0.60	9.0	15 36.8	11 49.3	+ 4 23.8	+0.1463	0.5560	0.1080	+45	-18
o ² Cancri	5.7	0.60	9.0	15 52.3	11 58.5	+ 4 32.7	-0.1462	0.5560	0.1082	+28	-34
81 Cancri	6.4	+0.66	-9.0	+15 18.0	18 47.4	+11 8.0	-0.3107	0.5567	-0.1183	+18	-45
π Cancri	5.6	0.68	9.0	15 15.3	20 7.6	-11 34.5	-0.4214	0.5568	0.1203	+12	-53
7 Leonis	6.2	0.78	8.9	14 43.0	14 5 38.2	- 2 23.1	-1.0558	0.5576	0.1330	-28	-76
11 Leonis	6.5	0.79	8.9	14 41.3	6 37.3	- 1 26.0	-1.1578	0.5577	0.1349	-38	-76
ψ Leonis	5.6	0.82	8.9	14 22.1	9 14.7	+ 1 6.1	-1.1759	0.5580	0.1384	-40	-76
18 Leonis	5.8	+0.84	-9.5	+12 9.5	10 29.0	+ 2 17.9	+0.9738	0.5581	-0.1401	+90	+27
19 Leonis	6.4	0.84	9.6	11 55.1	10 57.9	+ 2 45.8	+1.1583	0.5582	0.1406	+90	+43
R Leonis (var.)	4.6	0.84	9.6	11 46.8	11 1.4	+ 2 49.2	+1.2954	0.5582	0.1407	+82	+63
v Leonis	5.0	0.88	9.2	12 48.3	15 54.3	+ 7 32.2	-0.4838	0.5587	0.1470	+ 9	-60
a Leonis (Reg.)	1.3	0.92	9.1	12 20.2	20 33.9	-11 57.5	-0.6904	0.5593	0.1526	- 3	-76
45 Leonis	5.8	+1.02	-9.4	+10 8.9	15 5 22.3	- 3 27.0	+0.1987	0.5604	-0.1628	+48	-21
ρ Leonis	3.8	1.04	9.4	9 41.7	7 43.6	- 1 10.4	+0.2808	0.5607	0.1653	+53	-16
49 Leonis	5.7	1.05	9.6	9 2.4	8 44.6	- 0 11.6	1.07894	0.5609	0.1663	+90	+11
χ Leonis	4.7	1.16	9.3	7 44.7	22 21.4	-11 2.5	-0.2335	0.5632	0.1793	+23	-48
σ Leonis	4.1	1.23	9.2	6 26.6	16 5 37.0	- 4 1.9	-0.2242	0.5646	0.1850	+23	-47
b Virginis	5.2	+1.36	-8.6	+ 4 4.6	22 57.2	-11 17.6	-1.1170	0.5688	-0.1951	-32	-86
10 Virginis	6.2	1.40	8.7	+ 2 19.3	17 3 15.7	- 7 8.3	-0.1908	0.5700	0.1967	+25	-46
γ Virg. (mean)	2.9	1.49	8.0	- 1 2.1	17 17.9	+ 6 24.2	+0.3914	0.5742	0.1995	+59	-15
k Virginis	5.7	1.56	7.6	3 24.3	18 1 4.1	-10 6.2	+1.2030	0.5768	0.1992	+87	+40
46 Virginis	6.1	1.56	7.5	2 57.7	1 28.4	- 9 42.8	+0.6815	0.5770	0.1992	+83	+ 2
48 Virginis	6.5	+1.57	-7.4	- 3 15.4	2 53.9	- 8 20.3	+0.6907	0.5776	-0.1989	+87	+ 2
65 Virginis	6.0	1.60	6.7	4 31.7	11 12.0	- 0 20.3	+0.3098	0.5805	0.1967	+54	-19
66 Virginis	5.7	1.61	6.7	4 46.1	11 43.2	+ 0 9.8	+0.4454	0.5808	0.1966	+63	-12
72 Virginis	6.1	1.63	6.5	6 4.8	14 12.8	+ 2 33.9	+1.2554	0.5817	0.1956	+84	+46
l Virginis	4.8	1.63	6.4	5 51.9	14 52.2	+ 3 11.9	+0.9140	0.5819	0.1953	+85	+16
80 Virginis	5.6	+1.62	-6.2	- 5 0.7	16 22.5	+ 4 38.9	-0.2258	0.5825	-0.1946	+22	-49
566 B. Virginis	6.4	1.63	5.9	5 7.1	19 54.8	+ 8 3.4	-0.8050	0.5839	0.1928	-11	-90
88 Virginis	6.5	1.65	5.7	6 27.6	21 45.2	+ 9 49.8	+0.1684	0.5846	0.1917	+44	-27
598 B. Virginis	6.1	1.66	5.4	7 41.2	19 0 32.8	-11 28.9	+0.8468	0.5857	0.1900	+83	+12
623 B. Virginis	6.5	1.68	5.0	8 53.7	4 27.1	- 7 43.4	+1.3013	0.5872	0.1872	+82	+55
95 Virginis	5.4	+1.68	-4.9	- 8 57.2	5 26.0	- 6 46.6	+1.1752	0.5876	-0.1864	+82	+38
13 Libræ	5.7	1.70	2.6	11 35.4	20 0 57.3	-11 59.6	+0.3096	0.5951	0.1666	+50	-19
ξ ² Libræ	5.6	1.69	2.5	11 6.3	1 55.3	-11 3.9	-0.3284	0.5955	0.1654	+14	-56
17 Libræ	6.4	1.68	2.4	10 51.1	2 30.8	-10 29.7	-0.6752	0.5957	0.1646	- 7	-87
18 Libræ	5.9	1.68	2.4	10 50.4	2 47.2	-10 13.9	-0.7309	0.5958	0.1643	-10	-90
130 B. Libræ	5.9	+1.66	-1.1	-12 6.0	12 48.0	- 0 36.4	-1.0695	0.5992	-0.1503	-34	-90

ELEMENTS OF OCCULTATIONS, 1924. 487

APRIL.

THE STAR'S					AT CONJUNCTION IN R.A.					Limiting Parallels.	
Name.	Mag.	Reductions from 1924.0		Apparent Declina- tion.	Greenwich Mean Time.	Hour Angle, H	Y	x'	y'	N.	S.
		$\Delta\alpha$	$\Delta\delta$								
γ Libræ	4.0	+1.68	- 0.3	-14 32.2	20 17 24.8	+ 3 49.6	+0.6509	0.6007	-0.1432	+71	+ 1
190 B. Libræ	6.5	+1.66	+ 0.1	14 48.0	20 32.3	+ 6 49.7	+0.4705	0.6016	0.1381	+57	-10
η Libræ	5.5	+1.67	0.2	15 25.9	20 47.7	+ 7 4.5	+1.0564	0.6017	0.1377	+75	+28
195 B. Libræ	6.2	+1.63	0.4	13 54.3	23 48.0	+ 9 57.7	-0.8526	0.6025	0.1326	-21	-90
202 B. Libræ	6.4	+1.62	0.6	14 10.6	21 1 36.5	+11 41.9	-0.8221	0.6029	0.1295	-19	-90
203 B. Libræ	6.2	+1.63	+ 0.7	-14 36.4	1 43.6	+11 48.7	-0.4136	0.6030	-0.1293	+ 5	-62
48 Libræ	4.6	+1.62	0.7	14 3.7	2 22.8	-11 33.7	-1.0357	0.6031	0.1281	-34	-90
49 Libræ	5.4	+1.63	1.0	16 18.6	3 13.1	-10 45.4	+1.0726	0.6034	0.1267	+74	+30
91 B. Scorpïi	6.1	+1.58	1.5	14 39.6	9 18.5	- 4 54.5	-1.2925	0.6046	0.1155	-69	-77
φ Ophiuchi	4.4	+1.55	2.5	16 26.8	15 15.8	+ 0 48.6	-0.1834	0.6056	0.1041	+15	-47
24 Scorpïi	5.0	+1.53	+ 3.2	-17 35.7	19 18.9	+ 4 42.0	+0.5453	0.6062	-0.0960	+59	- 5
78 B. Ophiuchi	6.5	+1.46	3.6	16 41.1	22 0 56.9	+10 6.5	-0.8636	0.6066	0.0845	-26	-90
90 B. Ophiuchi	6.5	+1.46	4.0	18 7.8	2 22.4	+11 28.6	+0.4488	0.6067	0.0815	+50	-11
29 Ophiuchi	6.4	+1.46	4.3	18 46.4	3 11.4	-11 44.4	+1.0205	0.6067	0.0798	+72	+27
125 B. Ophiuchi	6.2	+1.42	4.2	17 30.5	5 41.2	- 9 20.7	-0.4260	0.6067	0.0745	- 1	-64
164 B. Ophiuchi	6.0	+1.37	+ 4.7	-17 40.6	10 12.5	- 5 0.2	-0.5751	0.6067	-0.0649	-10	-77
192 B. Ophiuchi	6.3	+1.36	5.0	18 22.5	12 2.1	- 3 15.0	+0.0034	0.6066	0.0609	+21	-36
305 B. Ophiuchi	6.3	+1.22	6.1	18 47.3	23 0 12.8	+ 8 26.3	-0.1646	0.6051	0.0342	+ 9	-46
39 G. Sagittarii	6.3	+1.14	6.8	19 51.4	6 11.5	- 9 49.3	+0.7397	0.6039	0.0209	+71	+ 7
16 Sagittarii	5.9	+1.13	7.1	20 24.6	7 44.5	- 8 19.9	+1.2654	0.6035	0.0175	+70	+62
64 B. Sagittarii	6.1	+1.12	+ 6.6	-18 41.1	7 52.8	- 8 12.0	-0.4666	0.6034	-0.0172	- 8	-67
52 G. Sagittarii	6.4	+1.10	6.5	18 29.4	8 39.2	- 7 27.4	-0.6739	0.6032	0.0155	-21	-90
17 H ¹ Sagittarii	6.4	+1.10	6.6	18 38.9	9 8.4	- 6 59.4	-0.5230	0.6031	0.0145	-12	-72
γ Sagit. (var.)	5.4	+1.08	6.8	18 53.6	10 10.9	- 5 59.3	-0.2913	0.6028	0.0121	0	-54
95 B. Sagittarii	5.7	+1.04	6.9	18 46.6	13 39.2	- 2 39.3	-0.4383	0.6018	0.0045	- 9	-65
100 B. Sagittarii	5.0	+1.03	+ 6.8	-18 27.2	14 8.9	- 2 10.8	-0.7641	0.6016	-0.0034	-27	-90
29 Sagittarii	5.3	0.93	7.8	20 24.6	21 20.7	+ 4 44.0	+1.2386	0.5991	+0.0122	+70	+54
171 B. Sagittarii	6.1	0.85	7.6	19 21.3	24 2 42.4	+ 9 53.1	+0.2705	0.5969	0.0236	+33	-20
173 B. Sagittarii	6.4	0.85	7.6	19 12.7	2 43.8	+ 9 54.4	+0.1261	0.5969	0.0237	+24	-29
187 B. Sagittarii	6.4	0.83	7.5	18 51.3	4 20.9	+11 27.8	-0.1943	0.5962	0.0271	+ 8	-48
190 B. Sagittarii	5.4	+0.82	+ 7.7	-19 24.5	4 47.9	+11 53.8	+0.3791	0.5960	+0.0280	+41	-14
195 B. Sagittarii	6.3	0.82	7.9	19 55.3	5 24.2	-11 31.3	+0.9171	0.5957	0.0293	+71	+19
d Sagittarii	5.0	0.77	7.7	19 5.2	8 34.4	- 8 28.5	+0.1747	0.5942	0.0358	+28	-26
226 B. Sagittarii	6.4	0.74	7.8	19 22.5	10 10.9	- 6 55.7	+0.5278	0.5936	0.0392	+53	- 6
ϱ Sagittarii	4.0	0.74	7.3	17 59.4	10 13.4	- 6 53.3	-0.8784	0.5935	0.0392	-31	-90
45 Sagittarii	6.0	+0.74	+ 7.5	-18 26.9	10 17.0	- 6 49.8	-0.4102	0.5935	+0.0394	- 3	-63
266 B. Sagittarii	6.1	0.65	7.8	19 1.2	16 13.2	- 1 7.2	+0.4407	0.5905	0.0513	+47	-11
267 B. Sagittarii	5.8	0.65	7.6	18 23.9	16 29.0	- 0 52.1	+0.1785	0.5904	0.0518	+10	-47
57 Sagittarii	6.0	0.56	7.9	19 14.2	22 42.6	+ 5 7.4	+1.0391	0.5870	0.0638	+71	+29
31 B. Capricorni	6.4	0.34	6.6	15 59.5	25 14 6.2	- 4 3.1	-1.0947	0.5782	0.0914	-42	-90
ϱ Capricorni	5.0	+0.33	+ 7.3	-18 3.8	14 8.3	- 4 1.0	+1.0460	0.5781	+0.0915	+72	+29
47 B. Capricorni	6.2	0.30	6.8	16 47.2	17 0.6	- 1 14.9	-0.0029	0.5764	0.0963	+24	-36
61 B. Capricorni	5.9	0.27	6.6	16 23.6	19 10.5	+ 0 50.3	-0.1965	0.5751	0.0998	+14	-48
94 B. Capricorni	5.7	0.17	6.3	16 19.4	26 2 37.5	+ 8 1.3	+0.5179	0.5705	0.1114	+59	- 7
95 B. Capricorni	5.9	0.17	5.8	14 46.5	3 5.6	+ 8 28.4	-1.0372	0.5703	0.1120	-35	-90
29 Capricorni	5.5	+0.07	+ 5.7	-15 29.2	10 37.6	- 8 15.4	+0.5872	0.5657	+0.1227	+65	- 3
42 Capricorni	5.1	-0.07	4.7	14 23.2	22 17.9	+ 3 1.0	+0.9617	0.5588	0.1376	+76	+21
151 B. Capricorni	6.1	0.11	4.1	13 4.6	27 2 2.4	+ 6 37.9	+0.1098	0.5567	0.1419	+36	-30
μ Capricorni	5.2	0.13	4.3	13 54.6	3 41.3	+ 8 13.5	+1.2222	0.5558	0.1437	+77	+45
e Aquarii	5.4	0.21	3.2	11 56.3	11 47.7	- 7 56.2	+0.3461	0.5514	0.1521	+51	-17
σ Aquarii	4.9	-0.30	+ 2.3	-11 4.0	21 18.1	+ 1 15.8	+0.9129	0.5465	+0.1606	+79	+17

488 ELEMENTS OF OCCULTATIONS, 1924.

APRIL.

THE STAR'S					AT CONJUNCTION IN R.A.					Limiting Parallels.	
Name.	Mag.	Reductions from 1924.0		Apparent Declina- tion.	Greenwich Mean Time.	Hour Angle, H	Y	x'	y'	N.	S.
		$\Delta\alpha$	$\Delta\delta$								
58 Aquarii	6.4	-0.31	+ 2.3	-11 17.7	27 21 47.8	+ 1 44.5	+1.2349	0.5463	+0.1610	+79	+46
213 B. Aquarii	6.5	0.34	1.2	8 42.5	28 3 17.1	+ 7 3.2	-0.6188	0.5437	0.1652	- 1	-80
λ Aquarii	3.8	0.38	0.6	7 59.1	7 55.8	+11 33.2	-0.6177	0.5417	0.1685	- 1	-79
78 Aquarii	6.3	0.38	0.4	7 36.5	8 53.2	-11 31.2	-0.8574	0.5412	0.1691	-15	-90
81 Aquarii	6.4	0.41	0.2	7 28.2	12 13.7	- 8 17.0	-0.4384	0.5398	0.1712	+10	-63
82 Aquarii	6.4	-0.41	0.0	- 6 58.9	12 47.7	- 7 44.1	-0.8625	0.5396	+0.1716	-15	-90
h Aquarii	5.4	0.43	+ 0.3	8 6.2	14 4.4	- 6 29.8	+0.5573	0.5392	0.1723	+70	- 5
φ Aquarii	4.4	0.46	- 0.6	6 27.6	18 36.5	- 2 6.1	-0.4178	0.5374	0.1748	+11	-62
96 Aquarii	5.7	0.47	0.9	5 32.4	21 7.5	+ 0 20.2	-0.9633	0.5365	0.1760	-21	-90
317 B. Aquarii	6.3	0.49	0.8	6 19.4	21 46.4	+ 0 57.9	-0.0081	0.5362	0.1703	+34	-36
URANUS	6.2	..	..	- 4 33.6	29 2 0.3	+ 5 4.1	-1.1537	0.5331	+0.1774	-36	-90
337 B. Aquarii	6.4	-0.50	- 1.5	4 56.8	2 11.1	+ 5 14.6	-0.7058	0.5347	0.1781	- 5	-90
342 B. Aquarii	6.5	0.51	1.7	4 30.2	3 11.1	+ 6 12.7	-1.0057	0.5344	0.1785	-25	-90
20 Piscium	5.6	0.56	2.5	3 11.1	11 27.7	- 9 45.7	-0.9395	0.5319	0.1813	-19	-90
24 Piscium	6.1	0.58	2.6	3 34.7	13 59.4	- 7 18.6	-0.0561	0.5313	0.1820	+32	-39
27 Piscium	5.1	-0.61	- 2.7	- 3 58.7	16 55.0	- 4 28.3	+0.9106	0.5305	+0.1826	+87	+16
29 Piscium	5.1	0.61	2.9	3 27.1	18 31.2	- 2 55.0	+0.6337	0.5302	0.1829	+79	- 1
4 Ceti	6.3	0.62	3.2	2 58.4	21 32.3	+ 0 0.7	+0.6688	0.5295	0.1834	+82	+ 1
5 Ceti	6.3	0.63	3.3	2 52.3	21 46.6	+ 0 14.6	+0.6029	0.5295	0.1834	+76	- 3
10 Ceti	6.4	0.66	4.4	0 28.3	30 7 13.8	+ 9 25.0	-0.2635	0.5277	0.1841	+21	-51
14 Ceti	5.4	-0.69	- 4.6	- 0 55.5	11 49.9	-10 7.2	+1.0770	0.5270	+0.1841	+90	+28

MAY.

33 Ceti	6.1	-0.75	- 6.2	+ 2 2.4	1 5 59.0	+ 7 29.9	+1.1678	0.5256	+0.1812	+90	+37
f Piscium	5.3	-0.76	- 6.6	+ 3 12.8	9 44.7	+11 8.9	+0.5634	0.5255	+0.1801	+73	- 4
NEW MOON.											
θ ^a Tauri	3.6	-0.76	- 9.9	+15 42.1	5 11 2.4	+ 9 32.1	+1.0041	0.5392	+0.0955	+90	+34
264 B. Tauri	4.8	0.76	9.9	16 1.6	11 58.3	+10 26.4	+0.7297	0.5393	0.0942	+90	+15
85 Tauri	6.0	-0.76	-10.0	+15 41.2	12 37.1	+11 4.0	+1.1685	0.5395	+0.0933	+90	+48
119 H ¹ Tauri	6.2	0.75	9.6	17 51.3	13 25.3	+11 50.7	-1.1673	0.5397	0.0922	-40	-73
275 B. Tauri	6.5	0.76	9.9	16 9.7	13 29.3	+11 54.5	+0.7209	0.5397	0.0921	+90	+15
α Tauri (Ald.)	1.1	1.75	9.9	16 21.3	14 36.6	-11 0.2	+0.6089	0.5399	0.0906	+80	+ 8
89 Tauri	5.8	0.75	9.9	15 52.8	15 43.0	- 9 55.9	+1.2370	0.5401	0.0890	+90	+58
318 B. Tauri	5.7	-0.72	- 9.8	+17 2.0	6 1 7.2	- 0 49.3	+0.7287	0.5419	+0.0756	+90	+17
m Tauri	5.0	0.68	9.4	18 32.5	5 59.2	+ 3 53.6	-0.5983	0.5428	0.0683	+ 2	-61
115 Tauri	5.3	0.65	9.5	17 53.7	15 35.0	-10 48.8	+0.7056	0.5443	0.0537	+90	+18
119 Tauri	4.9	0.64	9.3	18 32.2	18 0.6	- 8 27.8	+0.1195	0.5448	0.0499	+43	-14
120 Tauri	5.6	0.64	9.3	18 29.1	18 38.7	- 7 51.1	+0.2083	0.5449	0.0489	+48	- 9
B.D. +19° 11' 10"	6.0	-0.59	- 9.0	+19 50.8	7 3 42.1	+ 0 55.0	-0.9249	0.5461	+0.0345	-20	-71
57 Orionis	5.8	0.58	8.9	19 44.0	4 55.7	+ 2 6.3	-0.7580	0.5463	0.0325	- 8	-71
64 Orionis	5.1	0.56	8.8	19 41.4	9 0.5	+ 6 3.3	-0.5907	0.5468	0.0259	+ 2	-57
χ ^a Orionis	4.7	0.56	8.7	20 8.4	9 13.4	+ 6 15.7	-1.0822	0.5468	0.0256	-33	-70
68 Orionis	5.7	0.53	8.7	19 48.4	13 6.2	+10 1.1	-0.6260	0.5473	0.0192	0	-59
19 B. Geminorum	6.2	-0.53	- 9.0	+18 41.9	13 51.1	+10 44.5	+0.6144	0.5474	+0.0180	+82	+16
71 Orionis	5.1	0.53	8.9	19 10.9	14 28.0	+11 20.2	+0.0913	0.5474	0.0170	+41	-12
ν Geminorum	4.1	0.48	8.4	20 15.6	21 10.5	- 6 10.2	-1.0244	0.5481	+0.0059	-28	-70
74 B. Geminorum	6.2	0.41	8.8	18 16.5	8 5 58.0	+ 2 20.2	+1.1558	0.5487	-0.0087	+90	+56
f Geminorum	5.3	0.20	8.2	17 50.8	9 6 38.0	+ 2 12.1	+0.8977	0.5496	0.0496	+90	+31
g Geminorum	5.0	-0.18	- 7.8	+18 41.7	9 45.9	+ 5 13.9	-0.1943	0.5497	-0.0547	+25	-32

ELEMENTS OF OCCULTATIONS, 1924. 489

MAY.

THE STAR'S					AT CONJUNCTION IN R.A.					Limiting Parallels.	
Name.	Mag.	Reductions from 1924.0		Apparent Declina- tion.	Greenwich Mean Time.	Hour Angle, H	r	s'	y'	N.	S.
		$\Delta\alpha$	$\Delta\delta$								
209 B. Geminorum	6.2	-0.16	-7.5	+19 31.1	d h m	h m	-1 25 08	0.5497	-0.0592	-56	-71
3 Cancri	5.7	0.11	8.0	17 30.9	9 12 30.2	+7 52.9	+0.6743	0.5497	0.0659	+89	+15
10 H. Cancri	6.1	0.10	7.4	19 3.3	16 42.3	+11 56.7	-1.1301	0.5497	0.0689	-37	-71
ζ Can. (mean)	4.7	0.05	7.7	17 52.6	18 33.5	-10 15.8	-0.0972	0.5497	0.0745	+30	-28
d ¹ Cancri	5.9	-0.01	7.2	18 34.5	22 5.4	-6 50.8	-1.2696	0.5496	0.0827	-58	-72
d ² Cancri	6.2	+0.01	-7.6	+17 17.7	4 32.3	-0 36.5	+0.0210	0.5496	-0.0846	+37	-23
54 Cancri	6.3	0.14	7.7	15 37.9	16 26.8	+10 54.7	+0.7052	0.5496	0.1026	+90	+13
o ¹ Cancri	5.1	0.18	7.6	15 36.8	19 22.6	-10 15.2	+0.4172	0.5496	0.1069	+63	-4
o ² Cancri	5.7	0.18	7.5	15 52.3	19 32.0	-10 6.1	+0.1214	0.5496	0.1071	+43	-20
81 Cancri	6.4	0.24	7.3	15 18.1	11 2 30.3	-3 21.4	-0.0462	0.5496	0.1170	+33	-30
π Cancri	5.6	+0.27	-7.4	+15 15.3	3 52.3	-2 2.1	-0.1586	0.5496	-0.1189	+27	-36
227 B. Cancri	6.4	0.30	7.1	15 41.6	6 42.6	+0 42.6	-0.9694	0.5497	0.1229	-22	-75
NEPTUNE	7.7	..	..	15 48.3	8 24.5	+2 21.2	-1.2992	0.5494	0.1251	-63	-73
7 Leonis	6.2	0.38	7.1	14 43.1	13 37.1	+7 23.6	-0.8045	0.5498	0.1321	-10	-76
11 Leonis	6.5	0.39	7.2	14 41.4	14 37.7	+8 22.2	-0.9082	0.5498	0.1334	-17	-76
ψ Leonis	5.6	+0.42	-7.1	+14 22.1	17 19.2	+10 58.4	-0.9279	0.5499	-0.1369	-18	-76
18 Leonis	5.8	0.44	7.8	12 9.5	18 35.5	-11 47.7	+1.2480	0.5500	0.1385	+90	+53
ν Leonis	5.0	0.50	7.4	12 48.3	12 0 9.6	-6 24.6	-0.2315	0.5503	0.1454	+23	-44
α Leonis (Reg.)	1.3	0.55	7.3	12 20.2	4 56.9	-1 46.7	-0.4443	0.5505	0.1510	+11	-58
45 Leonis	5.8	0.67	7.6	10 8.9	14 0.4	+6 59.0	+0.4482	0.5513	0.1611	+64	-7
ρ Leonis	3.8	+0.70	-7.6	+9 41.8	16 25.7	+9 19.5	+0.5290	0.5516	-0.1636	+71	-4
49 Leonis	5.7	0.72	7.8	9 2.5	17 28.6	+10 20.3	+1.0431	0.5517	0.1646	+90	+29
χ Leonis	4.7	0.87	7.5	7 44.7	7 29.1	-0 6.9	-0.0101	0.5539	0.1776	+35	-35
σ Leonis	4.1	0.97	7.4	6 26.6	14 57.2	+7 6.4	-0.0115	0.5554	0.1835	+35	-35
b Virginis	5.2	1.18	7.0	4 4.6	14 8.6	+1 0.2	-0.9444	0.5601	0.1940	-18	-86
10 Virginis	6.2	+1.24	-7.2	+2 19.4	13 11.2	+4 35.4	-0.0170	0.5616	-0.1958	+35	-36
γ Vir. (mean)	2.9	1.39	6.9	-1 2.1	15 3 32.9	-5 32.6	+0.5306	0.5670	0.1991	+70	-6
k Virginis	5.7	1.50	6.7	3 24.3	11 28.3	+2 6.1	+1.3378	0.5704	0.1993	+77	+63
46 Virginis	6.1	1.50	6.6	2 57.7	11 53.1	+2 30.1	+0.8117	0.5706	0.1992	+88	+10
48 Virginis	6.5	1.52	6.5	3 15.4	13 20.1	+3 54.0	+0.8174	0.5713	0.1991	+87	+10
65 Virginis	6.0	+1.60	-6.0	-4 31.7	21 46.1	-11 58.0	+0.4126	0.5754	-0.1974	+60	-13
66 Virginis	5.7	1.62	6.0	4 46.1	22 17.8	-11 27.4	+0.5475	0.5756	0.1973	+71	-6
l Virginis	4.8	1.65	5.9	5 51.9	1 29.3	-8 22.8	+1.0099	0.5772	0.1962	+85	+23
80 Virginis	5.6	1.65	5.5	5 0.7	3 0.8	-6 54.6	-0.1389	0.5780	0.1956	+27	-44
566 B. Virginis	6.4	1.68	5.2	5 7.1	6 35.5	-3 27.7	-0.7290	0.5798	0.1940	-5	-90
88 Virginis	6.5	+1.71	-5.2	-6 27.6	8 27.0	-1 40.2	+0.2427	0.5808	-0.1931	+48	-22
598 B. Virginis	6.1	1.74	5.1	7 41.2	11 16.1	+1 2.7	+0.9153	0.5824	0.1914	+83	+17
95 Virginis	5.4	1.79	4.7	8 57.2	16 11.4	+5 47.1	+1.2302	0.5850	0.1882	+82	+44
13 Libræ	5.7	1.93	2.6	11 35.4	17 11 44.0	+0 35.2	+0.3098	0.5958	0.1694	+50	-19
ξ^a Libræ	5.6	1.93	2.4	11 6.3	12 41.9	+1 30.9	-0.3290	0.5962	0.1683	+14	-56
17 Libræ	6.4	+1.93	-2.3	-10 51.1	13 17.2	+2 4.9	-0.6762	0.5965	-0.1675	-6	-87
18 Libræ	5.9	1.93	2.3	10 50.4	13 33.4	+2 20.4	-0.7325	0.5967	0.1672	-9	-90
130 B. Libræ	5.9	1.97	1.2	12 6.0	23 30.0	+11 53.8	-1.0943	0.6018	0.1536	-37	-90
γ Libræ	4.0	2.02	0.5	14 32.2	4 3.8	-7 43.2	+0.6047	0.6041	0.1466	+69	-2
190 B. Libræ	6.5	2.03	-0.1	14 48.0	7 9.0	-4 45.4	+0.4172	0.6055	0.1416	+53	-13
η Libræ	5.5	+2.04	0.0	-15 25.9	7 24.2	-4 30.8	+0.9984	0.6056	-0.1412	+75	+24
195 B. Libræ	6.2	2.02	+0.4	13 54.3	10 21.9	-1 40.2	-0.9047	0.6069	0.1362	-23	-90
202 B. Libræ	6.4	2.02	0.6	14 10.6	12 8.8	+0 2.4	-0.8787	0.6076	0.1331	-23	-90
203 B. Libræ	6.2	2.03	0.7	14 36.4	12 15.8	+0 9.1	-0.4736	0.6077	0.1329	+1	-67
48 Libræ	4.6	2.02	0.7	14 3.7	12 54.3	+0 46.0	-1.0925	0.6080	0.1317	-39	-90
49 Libræ	5.4	+2.04	+0.7	-16 18.6	13 43.8	+1 33.6	+0.9970	0.6083	-0.1303	+74	+24

490 ELEMENTS OF OCCULTATIONS, 1924.

MAY.

THE STAR'S					AT CONJUNCTION IN R.A.					Limiting Parallels.	
Name.	Mag.	Reductions from 1924.0		Apparent Declina- tion.	Greenwich Mean Time.	Hour Angle, H	γ	γ'	γ''	N.	S.
		$\Delta\alpha$	$\Delta\delta$		d h m	h m					
ϕ Ophiuchi	4.4	+2.04	+2.5	-16 26.8	19 1 32.7	-11 6.3	-0.2776	0.6124	-0.1077	+10	-53
24 Scorpii	5.0	2.04	3.2	17 35.7	5 30.4	+7 18.4	+0.4339	0.6135	0.0996	+50	-11
78 B. Ophiuchi	6.5	2.01	3.9	16 41.1	11 0.1	-2 2.3	-0.9717	0.6147	0.0879	-33	-90
90 B. Ophiuchi	6.5	2.02	4.1	18 7.8	12 23.4	-0 42.3	+0.3220	0.6149	0.0849	+42	-18
29 Ophiuchi	6.4	2.03	4.3	18 46.4	13 11.1	+0 3.4	+0.8850	0.6151	0.0832	+72	+16
125 B. Ophiuchi	6.2	+2.00	+4.5	-17 30.5	15 37.0	+2 23.2	-0.5494	0.6154	-0.0778	-8	-74
164 B. Ophiuchi	6.0	1.98	5.1	17 40.6	20 0.7	+6 36.0	-0.7059	0.6159	0.0680	-18	-90
192 B. Ophiuchi	6.3	1.98	5.4	18 22.5	21 47.2	+8 18.1	-0.1387	0.6159	0.0640	+14	-44
305 B. Ophiuchi	6.3	1.90	6.9	18 47.3	20 9.35.4	-4 23.0	-0.3286	0.6155	0.0367	0	-56
16 G. Sagittarii	6.4	1.90	7.3	20 20.0	11 6.9	-2 55.3	+1.1395	0.6153	0.0331	+70	+39
39 G. Sagittarii	6.3	+1.86	+7.7	-19 51.4	15 22.4	+1 9.6	+0.5510	0.6146	-0.0232	+53	-4
16 Sagittarii	5.9	1.85	8.0	20 24.6	16 52.3	+2 35.9	+1.0659	0.6143	0.0196	+70	+32
64 B. Sagittarii	6.1	1.83	7.7	18 41.0	17 0.3	+2 43.5	-0.6402	0.6143	0.0193	-18	-85
52 G. Sagittarii	6.4	1.82	7.7	18 29.4	17 45.2	+3 26.6	-0.8457	0.6141	0.0176	-31	-90
17 H. Sagittarii	6.4	1.82	7.8	18 38.9	18 13.3	+3 53.5	-0.6978	0.6140	0.0165	-21	-90
γ Sagit. (var.)	5.4	+1.81	+7.9	-18 53.6	19 13.8	+4 51.6	-0.4715	0.6137	-0.0141	-9	-68
21 Sagittarii	5.0	1.81	8.4	20 34.9	20 42.9	+6 16.9	+1.1790	0.6133	0.0106	+70	+44
95 B. Sagittarii	5.7	1.78	8.2	18 46.5	22 34.9	+8 4.3	-0.6223	0.6128	0.0063	-18	-83
100 B. Sagittarii	5.0	1.77	8.2	18 27.2	23 3.6	+8 31.9	-0.9438	0.6126	-0.0052	-39	-90
29 Sagittarii	5.3	1.71	9.3	20 24.6	21 6 0.3	-8 48.5	+1.0155	0.6103	+0.0109	+70	+27
171 B. Sagittarii	6.1	+1.64	+9.4	-19 21.3	11 10.6	-3 50.8	+0.0544	0.6081	+0.0227	+20	-33
173 B. Sagittarii	6.4	1.64	9.4	19 12.7	11 12.0	-3 49.5	-0.0876	0.6081	0.0227	+12	-41
187 B. Sagittarii	6.4	1.62	9.4	18 51.2	12 45.7	-2 19.5	-0.4053	0.6074	0.0262	-5	-62
190 B. Sagittarii	5.4	1.62	9.6	19 24.5	13 11.7	-1 54.5	+0.1581	0.6073	0.0272	+27	-27
195 B. Sagittarii	6.3	1.61	9.7	19 55.3	13 46.8	-1 20.8	+0.6867	0.6070	0.0285	+66	+4
δ Sagittarii	5.0	+1.57	+9.7	-19 5.2	16 50.2	+1 35.2	-0.0484	0.6055	+0.0353	+16	-39
226 B. Sagittarii	6.4	1.55	9.9	19 22.5	18 23.3	+3 4.5	+0.2968	0.6046	0.0387	+37	-19
ρ Sagittarii	4.0	1.54	9.6	17 59.3	18 25.6	+3 6.7	-1.0870	0.6046	0.0387	-47	-90
45 Sagittarii	6.0	1.54	9.7	18 26.9	18 29.1	+3 10.1	-0.6262	0.6046	0.0389	-15	-83
266 B. Sagittarii	6.1	1.47	10.2	19 1.1	22 0 12.7	+8 40.0	+0.2030	0.6015	0.0511	+32	-24
267 B. Sagittarii	5.8	+1.47	+10.0	-18 23.9	0 27.9	+8 54.6	-0.4066	0.6013	+0.0517	-2	-62
57 Sagittarii	6.0	1.39	10.5	19 14.2	6 28.5	-9 18.9	+0.7841	0.5977	0.0640	+71	+10
π Capricorni	5.2	1.19	10.7	18 27.5	20 44.6	+4 24.3	+1.1184	0.5882	0.0913	+72	+36
ρ Capricorni	5.0	1.18	10.6	18 3.8	21 23.0	+5 1.3	+0.7755	0.5877	0.0924	+72	+9
47 B. Capricorni	6.2	1.14	10.2	16 47.1	23 0 9.7	+7 41.7	-0.2601	0.5858	0.0973	+10	-52
61 B. Capricorni	5.9	+1.11	+10.2	-16 23.6	2 15.6	+9 42.9	-0.4526	0.5842	+0.1009	0	-66
94 B. Capricorni	5.7	1.02	10.1	16 19.3	9 28.9	-7 19.6	+0.2463	0.5790	0.1127	+40	-22
95 B. Capricorni	5.9	1.01	9.6	14 46.5	9 56.1	-6 53.5	-1.2873	0.5787	0.1133	-66	-80
29 Capricorni	5.5	0.91	9.8	15 29.1	17 15.2	+0 9.7	+0.3104	0.5733	0.1243	+45	-19
42 Capricorni	5.1	0.76	9.0	14 23.1	24 4 37.4	+11 8.0	+0.6767	0.5651	0.1393	+74	+2
44 Capricorni	6.0	+0.75	+9.3	-14 44.7	5 17.8	+11 46.9	+1.1455	0.5646	+0.1401	+76	+36
151 B. Capricorni	6.1	0.72	8.6	13 4.5	8 16.6	-9 20.4	-0.1656	0.5625	0.1436	+20	-46
μ Capricorni	5.2	0.70	8.8	13 54.5	9 53.3	-7 47.1	+0.9339	0.5614	0.1454	+77	+18
ϵ Aquarii	5.4	0.60	7.8	11 56.2	17 49.5	-0 7.0	+0.0679	0.5561	0.1538	+34	-32
σ Aquarii	4.9	0.49	7.1	11 3.9	25 3 9.6	+8 54.7	+0.6314	0.5501	0.1622	+73	-1
58 Aquarii	6.4	+0.48	+7.2	-11 17.6	3 38.8	+9 22.9	+0.9507	0.5498	+0.1626	+79	+19
213 B. Aquarii	6.5	0.44	6.0	8 42.5	9 3.1	-9 23.3	-0.8847	0.5466	0.1668	-17	-90
λ Aquarii	3.8	0.39	5.5	7 59.0	13 38.0	-4 57.3	-0.8818	0.5440	0.1700	-17	-90
78 Aquarii	6.3	0.38	5.3	7 36.4	14 34.7	-4 2.3	-1.1193	0.5435	0.1706	-35	-90
81 Aquarii	6.4	0.35	5.0	7 28.1	17 52.8	-0 50.6	-0.7018	0.5417	0.1726	-5	-90
82 Aquarii	6.4	+0.34	+4.8	-6 58.9	18 26.4	-0 18.0	-1.1225	0.5414	+0.1730	-34	-90

ELEMENTS OF OCCULTATIONS, 1924. 491

MAY.

THE STAR'S					AT CONJUNCTION IN R.A.					Limiting Parallels.	
Name.	Mag.	Reductions from 1924.0		Apparent Declination.	Greenwich Mean Time.	Hour Angle, H	Y	x'	y'	N.	S.
		$\Delta\alpha$	$\Delta\delta$								
<i>h</i> Aquarii	5.4	+0.32	+5.2	-8 6.2	25 19 42.3	+0 55.5	+0.2880	0.5408	+0.1737	+51	-20
ϕ Aquarii	4.4	0.28	4.2	6 27.5	26 0 11.7	+5 16.4	-0.6774	0.5385	0.1761	-3	-86
χ Aquarii	5.3	0.26	4.8	8 8.4	1 26.1	+6 28.5	+1.3343	0.5380	0.1767	+75	+65
96 Aquarii	5.7	0.27	3.9	5 32.3	2 41.4	+7 41.4	-1.2177	0.5374	0.1773	-44	-90
317 B. Aquarii	6.3	0.25	4.1	6 19.3	3 20.0	+8 18.8	-0.2678	0.5370	0.1776	+19	-52
337 B. Aquarii	6.4	+0.22	+3.3	-4 56.7	7 42.8	-11 26.4	-0.9579	0.5352	+0.1794	-20	-90
342 B. Aquarii	6.5	0.22	3.1	4 30.1	8 42.3	-10 28.8	-1.2552	0.5347	0.1798	-47	-90
20 Piscium	5.6	0.14	2.2	3 11.0	16 56.4	-2 29.7	-1.1818	0.5315	0.1825	-38	-90
24 Piscium	6.1	0.11	2.1	3 34.6	19 27.6	-0 3.2	-0.2993	0.5306	0.1831	+19	-54
27 Piscium	5.1	0.08	2.0	3 58.6	22 22.7	+2 46.7	+0.6672	0.5297	0.1837	+82	+1
29 Piscium	5.1	+0.07	+1.8	-3 27.0	23 58.7	+4 19.8	+0.3935	0.5292	+0.1840	+59	-14
4 Ceti	6.3	0.05	1.4	2 58.3	27 2 59.5	+7 15.3	+0.4325	0.5283	0.1844	+62	-12
5 Ceti	6.3	+0.04	+1.4	2 52.2	3 13.8	+7 29.1	+0.3672	0.5282	0.1845	+57	-16
10 Ceti	6.4	-0.02	0.0	0 28.2	12 41.0	-7 20.5	-0.4831	0.5258	0.1851	+9	-67
14 Ceti	5.4	0.06	-0.2	0 55.4	17 17.5	-2 52.2	+0.8618	0.5249	0.1850	+90	+13
33 Ceti	6.1	-0.19	-2.2	+2 2.5	28 11 30.7	-9 11.0	+0.9858	0.5228	+0.1821	+90	+22
<i>f</i> Piscium	5.3	0.21	2.8	3 12.8	15 17.5	-5 30.9	+0.3889	0.5226	0.1810	+60	-14
117 G. Piscium	6.5	0.24	3.1	3 8.5	20 2.9	-0 53.8	+1.3275	0.5225	0.1793	+81	+60
μ Piscium	5.0	0.22	3.8	5 45.1	21 44.6	+0 45.0	-1.2350	0.5224	0.1788	-44	-85
ν Piscium	4.7	0.28	4.0	5 6.1	29 3 38.8	+6 28.9	+0.5266	0.5226	0.1763	+70	-6
39 B. Arietis	6.5	-0.34	-5.2	+7 22.2	15 52.3	-5 39.0	+0.1477	0.5235	+0.1700	+44	-26
64 Ceti	5.8	0.36	5.6	8 12.8	19 15.9	-2 21.3	-0.2101	0.5239	0.1678	+24	-46
ξ^1 Ceti	4.5	0.36	5.7	8 29.4	20 7.0	-1 31.8	-0.3721	0.5239	0.1673	+15	-56
ξ Arietis	5.5	0.38	6.3	10 15.9	30 2 14.9	+4 25.5	-1.3224	0.5247	0.1632	-63	-75
25 Arietis	6.5	0.40	6.4	9 51.6	3 36.2	+5 44.4	-0.6540	0.5250	0.1622	0	-77
389 B. Ceti	6.3	-0.40	-6.2	+9 13.5	4 44.3	+6 50.5	+0.2317	0.5252	+0.1614	+50	-20
85 Ceti	6.3	0.44	6.8	10 25.0	11 24.4	-10 41.2	-0.0276	0.5263	0.1563	+34	-34
μ Ceti	4.4	0.44	6.7	9 47.5	12 40.2	-9 27.6	+0.8612	0.5266	0.1552	+90	+17
147 B. Arietis	5.8	-0.48	-7.6	+12 53.6	23 41.4	+1 14.0	-0.9191	0.5289	+0.1455	-17	-78

JUNE.

					NEW MOON.						
16 Geminorum	6.2	-0.59	-8.2	+20 32.4	4 2 35.7	+1 3.3	-1.1795	0.5497	+0.0086	-44	-70
ν Geminorum	4.1	-0.58	-8.2	+20 15.6	3 4.9	+1 31.6	-0.8637	0.5498	+0.0078	-15	-70
<i>f</i> Geminorum	5.3	0.42	7.5	17 50.8	5 12 29.6	+9 51.1	+1.1174	0.5505	-0.0482	+90	+48
<i>g</i> Geminorum	5.0	0.41	7.2	18 41.7	15 37.8	-11 6.8	-0.0262	0.5504	0.0533	+37	-20
209 B. Geminorum	6.2	0.39	6.9	19 31.1	18 22.3	-8 27.7	-1.0309	0.5502	0.0578	-28	-71
3 Cancri	5.7	0.35	7.2	17 31.0	22 34.9	-4 23.3	+0.9077	0.5500	0.0647	+90	+30
10 H. Cancri	6.1	-0.35	-6.8	+19 3.4	6 0 26.4	-2 35.4	-0.9022	0.5499	-0.0676	-18	-71
ζ Can. (mean)	4.7	0.31	6.9	17 52.6	3 59.1	+0 50.4	+0.1398	0.5496	0.0733	+44	-15
δ^1 Cancri	5.9	0.28	6.4	18 34.5	9 16.1	+5 57.1	-1.0326	0.5492	0.0815	-28	-72
δ^2 Cancri	6.2	0.27	6.8	17 17.8	10 27.7	+7 6.4	+0.2662	0.5491	0.0834	+52	-10
θ Cancri	5.5	0.25	6.3	18 21.0	13 10.8	+9 44.1	-1.1161	0.5489	0.0875	-35	-72
54 Cancri	6.3	-0.16	-6.5	+15 37.9	22 27.0	-5 17.6	+0.9677	0.5480	-0.1014	+90	+31
<i>X</i> Can. (var.)	6.2	0.15	5.9	17 31.2	7 0 30.0	-3 18.7	-1.2940	0.5479	0.1043	-66	-71
σ^1 Cancri	5.1	0.13	6.4	15 36.8	1 24.4	-2 26.0	+0.6805	0.5478	0.1056	+90	+11
σ^2 Cancri	5.7	0.13	6.4	15 52.3	1 33.9	-2 16.7	+0.3828	0.5478	0.1059	+60	-5
81 Cancri	6.4	0.08	6.1	15 18.1	8 36.5	+4 32.2	+0.2199	0.5471	0.1157	+49	-15
π Cancri	5.6	-0.05	-6.1	+15 15.4	9 59.5	+5 52.5	+0.1077	0.5470	-0.1177	+42	-21

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JUNE.

THE STAR'S				AT CONJUNCTION IN R.A.						Limiting Parallels.	
Name.	Mag.	Reductions from 1924.0		Apparent Declina- tion.	Greenwich Mean Time.	Hour Angle, H	γ	α'	γ'	N.	S.
		$\Delta\alpha$	$\Delta\delta$		d h m	h m					
227 B. Cancri	6.4	-0.03	-5.8	+15 41.6	7 12 51.9	+ 8 39.3	-0.7080	0.5467	-0.1215	-4	-75
NEPTUNE	7.8	..	..	15 41.1	15 19.6	+11 2.3	-1.0027	0.5457	0.1245	-24	-74
7 Leonis	6.2	+0.05	5.7	14 43.1	19 52.0	- 8 34.0	-0.5379	0.5462	0.1307	+ 6	-62
11 Leonis	6.5	0.06	5.7	14 41.4	20 53.5	- 7 34.6	-0.6421	0.5461	0.1320	0	-72
ψ Leonis	5.6	0.09	5.6	14 22.1	23 37.5	- 4 55.8	-0.6610	0.5460	0.1354	- 1	-73
ν Leonis	5.0	+0.17	- 5.8	+12 48.4	8 6 34.9	+ 1 48.3	+0.0450	0.5455	-0.1437	+38	-28
α Leonis (<i>Reg.</i>)	1.3	0.22	5.6	12 20.3	11 27.7	+ 6 31.7	-0.1688	0.5454	0.1494	+26	-40
45 Leonis	5.8	0.34	5.8	10 8.9	20 42.6	- 8 31.2	+0.7354	0.5452	0.1592	+90	+ 9
ϱ Leonis	3.8	0.37	5.8	9 41.8	23 11.3	- 6 7.3	+0.8172	0.5452	0.1617	+90	+13
χ Leonis	4.7	0.55	5.7	7 44.7	9 14 37.6	+ 8 49.2	+0.2684	0.5460	0.1754	+52	-19
308 B. Leonis	5.8	+0.61	- 5.0	+ 8 28.5	18 54.7	-11 2.0	-1.2561	0.5465	-0.1787	-47	-82
σ Leonis	4.1	0.66	5.5	6 26.7	22 18.6	- 7 44.6	+0.2633	0.5469	0.1811	+51	-20
6 Virginis	5.2	0.90	5.0	4 4.6	10 16 40.7	+10 1.5	-0.6986	0.5505	0.1915	- 3	-86
10 Virginis	6.2	0.97	5.3	+ 2 19.4	21 14.6	- 9 33.6	+0.2379	0.5517	0.1933	+50	-22
γ Vir. (<i>mean</i>)	2.9	1.16	5.2	- 1 2.1	11 12 5.4	+ 4 47.7	+0.7832	0.5567	0.1909	+89	+ 8
46 Virginis	6.1	+1.30	- 5.0	- 2 57.7	20 42.7	-10 52.4	+1.0454	0.5602	-0.1972	+88	+26
48 Virginis	6.5	1.32	5.0	3 15.3	22 12.6	- 9 25.5	+1.0484	0.5609	0.1971	+87	+26
65 Virginis	6.0	1.44	4.5	4 31.7	12 6 55.6	- 1 0.6	+0.6216	0.5651	0.1956	+78	- 2
66 Virginis	5.7	1.46	4.5	4 46.1	7 28.3	- 0 29.0	+0.7574	0.5654	0.1955	+86	+ 6
1 Virginis	4.8	1.50	4.5	5 51.9	10 46.2	+ 2 42.1	+1.2195	0.5670	0.1945	+85	+42
80 Virginis	5.6	+1.51	- 4.0	- 5 0.6	12 20.6	+ 4 13.1	+0.0516	0.5679	-0.1940	+38	-33
566 B. Virginis	6.4	1.55	3.7	5 7.1	16 2.1	+ 7 46.8	-0.5540	0.5699	0.1926	+ 5	-73
88 Virginis	6.5	1.59	3.9	6 27.6	17 57.2	+ 9 37.9	+0.4267	0.5710	0.1917	+61	-13
598 B. Virginis	6.1	1.63	4.0	7 41.2	20 51.5	-11 34.0	+1.1019	0.5726	0.1903	+83	+31
235 G. Virginis	6.5	1.75	2.8	7 11.2	13 6 45.7	- 2 1.1	-1.2515	0.5785	0.1839	-48	-90
13 Libræ	5.7	+1.95	- 1.8	-11 35.4	21 59.3	-11 21.3	+0.4285	0.5882	-0.1696	+58	-12
ξ^a Libræ	5.6	1.96	1.6	11 6.3	22 58.5	-10 24.3	-0.2188	0.5888	0.1686	+20	-49
17 Libræ	6.4	1.96	1.5	10 51.0	23 34.6	- 9 49.5	-0.5708	0.5892	0.1679	0	-75
18 Libræ	5.9	1.96	1.4	10 50.4	23 51.3	- 9 33.5	-0.6283	0.5894	0.1676	- 3	-81
130 B. Libræ	5.9	2.06	0.3	12 6.0	14 9 59.8	+ 0 11.7	-1.0170	0.5958	0.1546	-29	-90
γ Libræ	4.0	+2.14	- 0.1	-14 32.2	14 38.3	+ 4 39.4	+0.6821	0.5987	-0.1479	+74	+ 2
190 B. Libræ	6.5	2.17	+ 0.3	14 48.0	17 46.3	+ 7 40.0	+0.4849	0.6006	0.1430	+58	- 9
η Libræ	5.5	2.18	0.2	15 25.9	18 1.7	+ 7 54.9	+1.0689	0.6007	0.1427	+75	+29
195 B. Libræ	6.2	2.18	1.0	13 54.3	21 1.8	+10 47.9	-0.8528	0.6025	0.1377	-20	-90
202 B. Libræ	6.4	2.19	1.2	14 10.6	22 50.0	-11 28.2	-0.8309	0.6035	0.1348	-18	-90
203 B. Libræ	6.2	+2.20	+ 1.2	-14 36.4	22 57.2	-11 21.3	-0.4241	0.6036	-0.1346	+ 5	-63
48 Libræ	4.6	2.19	1.3	14 3.6	23 36.1	-10 44.0	-1.0476	0.6040	0.1335	-35	-90
49 Libræ	5.4	2.22	1.0	16 18.6	15 0 26.2	- 9 55.8	+1.0494	0.6044	0.1320	+74	+28
φ Ophiuchi	4.4	2.30	2.9	16 26.8	12 20.9	+ 1 30.1	-0.2613	0.6105	0.1100	+11	-52
24 Scorpïi	5.0	2.33	3.5	17 35.7	16 19.6	+ 5 19.1	+0.4409	0.6124	0.1020	+51	-11
78 B. Ophiuchi	6.5	+2.33	+ 4.4	-16 41.1	21 49.9	+10 35.8	-0.9794	0.6145	-0.0905	-34	-90
90 B. Ophiuchi	6.5	2.36	4.4	18 7.8	23 13.2	+11 55.7	+0.3106	0.6150	0.0875	+41	-18
29 Ophiuchi	6.4	2.37	4.6	18 46.4	0 0.9	-11 18.6	+0.8713	0.6152	0.0858	+72	+15
125 B. Ophiuchi	6.2	2.35	5.0	17 30.5	2 26.5	- 8 59.1	-0.5684	0.6160	0.0805	- 9	-76
164 B. Ophiuchi	6.0	2.36	5.7	17 40.6	6 49.4	- 4 47.2	-0.7352	0.6172	0.0707	-19	-90
192 B. Ophiuchi	6.3	+2.38	+ 5.9	-18 22.5	8 35.4	- 3 5.5	-0.1735	0.6177	-0.0667	+12	-46
305 B. Ophiuchi	6.3	2.37	7.7	18 47.3	20 17.8	+ 8 7.4	-0.3911	0.6192	0.0394	- 2	-61
16 G. Sagittarii	6.4	2.39	7.9	20 20.0	21 48.2	+ 9 34.2	+1.0661	0.6193	0.0358	+70	+32
39 G. Sagittarii	6.3	2.37	8.5	19 51.3	17 2 0.4	-10 24.3	+0.4699	0.6193	0.0257	+47	- 9
16 Sagittarii	5.9	2.38	8.7	20 24.6	3 29.0	- 8 59.3	+0.9779	0.6192	0.0221	+70	+24
64 B. Sagittarii	6.1	+2.35	+ 8.7	-18 41.0	3 36.9	- 8 51.8	-0.7179	0.6192	-0.0218	-23	-90

ELEMENTS OF OCCULTATIONS, 1924. 493

JUNE.

THE STAR'S					AT CONJUNCTION IN R.A.					Limiting Parallels.	
Name.	Mag.	Reductions from 1924.0		Apparent Declination.	Greenwich Mean Time.	Hour Angle, H	γ	α'	γ'	N.	S.
		$\Delta\alpha$	$\Delta\delta$		d h m	h m					
52 G. Sagittarii	6.4	+2.34	+ 8.7	-18 29.4	17 4 21.1	- 8 9.5	-0.9238	0.6191	-0.0200	-36	-90
17 H. Sagittarii	6.4	2.34	8.8	18 38.9	4 48.9	- 7 42.8	-0.7779	0.6191	0.0190	-26	-90
Y Sagit. (var.)	5.4	2.34	9.0	18 53.6	5 48.4	- 6 45.9	-0.5554	0.6190	0.0166	-13	-75
21 B. Sagittarii	5.0	2.36	9.2	20 34.9	7 16.2	- 5 21.8	+1.0806	0.6188	0.0130	+70	+33
95 B. Sagittarii	5.7	2.33	9.4	18 46.5	9 6.3	- 3 36.2	-0.7124	0.6186	0.0086	-23	-90
100 B. Sagittarii	5.0	+2.32	+ 9.4	-18 27.2	9 34.4	- 3 9.3	-1.0327	0.6185	-0.0075	-45	-90
29 Sagittarii	5.3	2.31	10.4	20 24.6	16 23.4	+ 3 22.7	+0.8956	0.6171	+0.0088	+70	+18
36 Sagittarii	5.1	2.30	10.8	20 45.2	19 16.5	+ 6 8.6	+1.2714	0.6163	0.0157	+70	+66
171 B. Sagittarii	6.1	2.26	10.9	19 21.2	21 27.2	+ 8 13.9	-0.0686	0.6156	0.0208	+13	-40
173 B. Sagittarii	6.4	2.26	10.9	19 12.6	21 28.5	+ 8 15.1	-0.2094	0.6156	0.0209	+ 6	-49
187 B. Sagittarii	6.4	+2.25	+11.0	-18 51.2	23 0.1	+ 9 43.0	-0.5274	0.6150	+0.0244	-12	-72
190 B. Sagittarii	5.4	2.25	11.1	19 24.4	23 25.6	+10 7.4	+0.0298	0.6149	0.0254	+19	-34
195 B. Sagittarii	6.3	2.26	11.2	19 55.3	23 59.8	+10 40.1	+0.5519	0.6147	0.0268	+53	- 4
d Sagittarii	5.0	2.22	11.5	19 5.2	18 2 58.9	-10 28.0	-0.1825	0.6135	0.0337	+ 8	-47
226 B. Sagittarii	6.4	2.21	11.7	19 22.5	4 29.8	- 9 0.9	+0.1559	0.6129	0.0371	+27	-27
g Sagittarii	4.0	+2.20	+11.5	-17 59.3	4 32.0	- 8 58.8	-1.2136	0.6129	+0.0372	-61	-90
45 Sagittarii	6.0	2.20	11.5	18 26.8	4 35.5	- 8 55.4	-0.7578	0.6128	0.0374	-24	-90
266 B. Sagittarii	6.1	2.16	12.2	19 1.1	10 10.3	+ 3 34.2	+0.0512	0.6102	0.0500	+23	-33
267 B. Sagittarii	5.8	2.16	12.1	18 23.9	10 25.1	- 3 20.1	-0.5521	0.6101	0.0505	-10	-75
f Sagittarii	5.1	2.13	12.6	19 56.5	13 59.8	+ 0 5.9	+1.1756	0.6082	0.0583	+71	+43
57 Sagittarii	6.0	+2.11	+12.7	-19 14.1	16 15.9	+ 2 16.6	+0.6128	0.6070	+0.0632	+62	- 1
π Capricorni	5.2	1.96	13.5	18 27.5	19 6 6.7	- 8 25.6	+0.9157	0.5982	0.0913	+72	+18
g Capricorni	5.0	1.95	13.4	18 3.7	6 44.0	- 7 49.8	+0.5763	0.5978	0.0925	+61	- 3
47 B. Capricorni	6.2	1.92	13.3	16 47.1	9 25.5	- 5 14.6	-0.4502	0.5959	0.0975	0	-65
61 B. Capricorni	5.9	1.89	13.4	16 23.5	11 27.4	- 3 17.3	-0.6435	0.5944	0.1012	-10	-84
94 B. Capricorni	5.7	+1.82	+13.6	-16 19.2	18 26.9	+ 3 26.1	+0.0344	0.5893	+0.1133	+28	-34
29 Capricorni	5.5	1.72	13.5	15 29.1	20 1 58.1	+10 40.5	+0.0862	0.5835	0.1253	+32	-31
42 Capricorni	5.1	1.59	13.2	14 23.0	12 58.1	- 2 43.5	+0.4327	0.5750	0.1408	+56	-12
44 Capricorni	6.0	1.58	13.4	14 44.6	13 37.3	- 2 5.8	+0.8939	0.5745	0.1417	+76	+16
45 Capricorni	5.8	1.58	13.5	15 5.7	14 1.7	- 1 42.2	+1.3105	0.5742	0.1421	+71	+67
151 B. Capricorni	6.1	+1.55	+12.9	-13 4.4	16 30.3	+ 0 41.1	-0.4016	0.5723	+0.1452	+ 8	-61
μ Capricorni	5.2	1.54	13.2	13 54.4	18 3.9	+ 2 11.4	+0.6802	0.5710	0.1471	+74	+ 2
e Aquarii	5.4	1.44	12.5	11 56.1	21 1 45.0	+ 9 36.3	-0.1812	0.5652	0.1557	+21	-47
σ Aquarii	4.9	1.34	12.0	11 3.8	10 48.1	- 5 39.1	+0.3668	0.5586	0.1644	+54	-16
58 Aquarii	6.4	1.33	12.0	11 17.5	11 16.4	- 5 11.9	+0.6814	0.5583	0.1647	+77	+ 2
213 B. Aquarii	6.5	+1.28	+11.0	- 8 42.4	16 31.3	- 0 7.5	-1.1325	0.5546	+0.1690	-36	-90
λ Aquarii	3.8	1.23	10.6	7 58.9	20 58.6	+ 4 10.9	-1.1325	0.5517	0.1722	-36	-90
81 Aquarii	6.4	1.19	10.3	7 28.0	22 1 6.5	+ 8 10.8	-0.9571	0.5490	0.1748	-21	-90
h Aquarii	5.4	1.17	10.4	8 6.1	2 53.0	+ 9 53.9	+0.0194	0.5479	0.1759	+35	-35
φ Aquarii	4.4	1.13	9.5	6 27.4	7 15.5	- 9 52.1	-0.9354	0.5453	0.1783	-19	-90
χ Aquarii	5.3	+1.10	+10.1	- 8 8.3	8 28.0	- 8 41.9	+1.0512	0.5446	+0.1788	+82	+26
317 B. Aquarii	6.3	1.08	9.4	6 19.2	10 19.2	- 6 54.4	-0.5317	0.5435	0.1798	+ 5	-71
337 B. Aquarii	6.4	1.06	8.6	4 56.7	14 35.7	- 2 45.9	-1.2145	0.5412	0.1817	-42	-90
24 Piscium	6.1	0.94	7.5	3 34.5	23 2 5.3	+ 8 22.1	-0.5638	0.5355	0.1851	+ 4	-74
27 Piscium	5.1	0.90	7.5	3 58.5	4 57.1	+11 8.6	+0.3932	0.5342	0.1857	+59	-14
29 Piscium	5.1	+0.89	+ 7.2	- 3 26.9	6 31.3	-11 20.0	+0.1228	0.5336	+0.1860	+42	-29
4 Ceti	6.3	0.87	6.9	2 58.2	9 28.9	- 8 28.0	+0.1623	0.5324	0.1864	+44	-27
5 Ceti	6.3	0.86	6.8	2 52.1	9 43.0	- 8 14.2	+0.0977	0.5323	0.1864	+41	-30
10 Ceti	6.4	0.79	5.4	0 28.1	19 1.0	+ 0 46.9	-0.7409	0.5290	0.1869	- 6	-90
14 Ceti	5.4	0.74	5.2	0 55.3	23 33.6	+ 5 11.3	+0.5955	0.5276	0.1867	+76	- 3
26 Ceti	6.0	+0.61	+ 3.6	+ 0 57.7	24 14 5.6	- 4 42.6	+1.2658	0.5243	+0.1845	+90	+48

494 ELEMENTS OF OCCULTATIONS, 1924.

JUNE.

THE STAR'S					AT CONJUNCTION IN R.A.					Limiting Parallels.	
Name.	Mag.	Reductions from 1924.0		Apparent Declina- tion.	Greenwich Mean Time.	Hour Angle, H	P	α'	η'	N.	S.
		$\Delta\alpha$	$\Delta\delta$								
33 Ceti	6.1	s	"	°	d h m	h m				°	'
f Piscium	5.3	+0.58	+3.0	+2 2.5	24 17 35.1	-1 19.3	+0.7346	0.5238	+0.1835	+90	+5
117 G. Piscium	6.5	0.56	2.3	3 12.9	21 20.3	+2 19.3	+0.1455	0.5233	0.1824	+44	-27
v Piscium	4.7	0.52	2.0	3 8.5	25 2 3.7	+6 54.4	+1.0842	0.5229	0.1807	+90	+29
39 B. Arietis	6.5	0.46	+0.8	5 6.2	9 37.4	-9 45.1	+0.2971	0.5225	0.1775	+54	-19
	6.5	0.38	-0.8	7 22.3	21 48.8	+2 5.0	-0.0635	0.5226	0.1711	+32	-38
64 Ceti	5.8	+0.35	-1.3	+8 12.9	26 1 12.0	+5 22.2	-0.4150	0.5228	+0.1690	+13	-59
ξ^1 Ceti	4.5	0.35	1.4	8 29.4	2 3.1	+6 11.7	-0.5753	0.5228	0.1685	+4	-72
25 Arietis	6.5	0.29	2.4	9 51.7	9 32.2	-10 32.2	-0.8451	0.5236	0.1634	-12	-81
ξ^2 Ceti	4.3	0.28	1.8	8 7.2	9 56.2	-10 9.0	+1.1412	0.5237	0.1631	+90	+37
389 B. Ceti	6.3	0.28	2.2	9 13.6	10 40.3	-9 26.2	+0.0399	0.5237	0.1625	+38	-31
85 Ceti	6.3	+0.23	-3.0	+10 25.1	17 20.7	-2 57.6	-0.2080	0.5247	+0.1574	+24	-45
μ Ceti	4.4	0.23	2.9	9 47.6	18 36.6	-1 43.8	+0.6808	0.5249	0.1564	+87	+5
147 B. Arietis	5.8	0.16	4.4	12 53.6	27 5 38.9	+8 58.9	-1.0765	0.5270	0.1467	-29	-78
8 B. Tauri	6.2	0.08	4.7	12 21.6	14 45.0	-6 11.3	+0.8105	0.5290	0.1378	+90	+15
f Tauri	4.3	+0.06	5.0	12 40.6	18 9.6	-2 52.8	+0.9242	0.5299	0.1343	+90	+23
179 B. Tauri	5.9	-0.06	-6.3	+14 57.5	28 12 41.7	-8 54.4	+0.6855	0.5349	+0.1129	+90	+11
48 Tauri	6.3	0.08	6.5	15 12.6	16 43.1	-5 0.5	+0.8503	0.5361	0.1077	+90	+22
γ Tauri	3.9	0.10	6.6	15 26.6	18 42.9	-3 4.3	+0.8034	0.5366	0.1052	+90	+19
δ Tauri	3.9	0.10	7.0	17 21.8	20 14.8	-1 35.2	-1.1710	0.5371	0.1032	-40	-73
63 Tauri	5.7	0.10	6.9	16 36.0	20 29.9	-1 20.6	-0.2956	0.5372	0.1029	+19	-43
64 Tauri	4.9	-0.10	-7.1	+17 16.0	20 49.5	-1 1.6	-1.0046	0.5373	+0.1025	-25	-73
70 Tauri	6.4	0.11	6.8	15 46.0	21 36.1	-0 16.4	+0.7426	0.5375	0.1014	+90	+15
71 Tauri	4.6	0.12	6.7	15 26.7	21 57.9	+0 4.7	+1.1367	0.5376	0.1009	+90	+44
75 Tauri	5.2	0.12	6.9	16 11.3	22 59.7	+1 4.6	+0.4132	0.5379	0.0996	+62	-3
θ^1 Tauri	4.2	0.12	6.8	15 47.6	23 3.8	+1 8.6	+0.8603	0.5379	0.0995	+90	+24
θ^2 Tauri	3.6	-0.12	-6.8	+15 42.1	23 6.5	+1 11.2	+0.9660	0.5379	+0.0994	+90	+31
264 B. Tauri	4.8	0.13	6.9	16 1.7	29 0 2.6	+2 5.6	+0.6958	0.5382	0.0982	+90	+13
81 Tauri	5.5	0.13	6.8	15 31.5	0 5.6	+2 8.5	+1.2588	0.5382	0.0981	+87	+61
85 Tauri	6.0	0.13	6.9	15 41.3	0 41.4	+2 43.2	+1.1370	0.5384	0.0973	+90	+45
119 H ¹ Tauri	6.2	0.13	7.3	17 51.3	1 29.8	+3 30.1	-1.1943	0.5385	0.0962	-44	-73
275 B. Tauri	6.5	-0.14	-7.0	+16 9.8	1 33.8	+3 34.0	+0.6932	0.5386	+0.0961	+90	+13
α Tauri (<i>Alde.</i>)	1.1	0.14	7.1	16 21.3	2 41.1	+4 39.1	+0.5860	0.5390	0.0946	+78	+7
89 Tauri	5.8	0.15	7.0	15 52.8	3 47.6	+5 43.6	+1.2185	0.5393	0.0930	+90	+54
318 B. Tauri	5.7	-0.20	-7.4	+17 2.0	13 11.9	-9 9.7	+0.7494	0.5419	+0.0796	+90	+19

JULY.

					NEW MOON.						
θ Cancri	5.5	-0.32	-5.9	+18 21.0	3 18 46.2	-6 53.1	-0.9839	0.5518	-0.0865	-24	-72
54 Cancri	6.3	-0.26	-5.8	+15 37.9	4 3 59.2	+2 2.0	+1.1131	0.5507	-0.1004	+90	+43
X Cancri (<i>var.</i>)	6.2	0.26	5.4	17 31.2	6 1.4	+4 0.3	-1.1462	0.5505	0.1034	-38	-73
α^1 Cancri	5.1	0.24	5.7	15 36.8	6 55.6	+4 52.6	+0.8304	0.5504	0.1048	+90	+21
α^2 Cancri	5.7	0.24	5.6	15 52.4	7 5.1	+5 1.9	+0.5327	0.5504	0.1050	+72	+3
81 Cancri	6.4	0.22	5.2	15 18.1	14 5.7	+11 48.8	+0.3794	0.5494	0.1149	+60	-7
π Cancri	5.6	-0.19	-5.3	+15 15.4	15 28.4	-10 51.2	+0.2689	0.5492	-0.1169	+52	-13
227 B. Cancri	6.4	0.17	5.0	15 41.6	18 20.2	-8 5.0	-0.5441	0.5489	0.1208	+5	-62
NEPTUNE	7.8	...	...	15 27.8	22 9.3	+4 23.3	-0.7664	0.5470	0.1254	-8	-75
7 Leonis	6.2	0.12	4.8	14 43.1	5 1 19.2	-1 19.5	-0.3654	0.5479	0.1299	+16	-50
11 Leonis	6.5	0.12	4.8	14 41.4	2 20.6	-0 20.1	-0.4687	0.5478	0.1312	+10	-57
ψ Leonis	5.6	-0.09	-4.7	+14 22.1	5 4.4	+2 18.4	-0.4846	0.5474	-0.1346	+9	-59

ELEMENTS OF OCCULTATIONS, 1924. 495

JULY.

THE STAR'S					AT CONJUNCTION IN R.A.					Limiting Parallels.	
Name.	Mag.	Reductions from 1924.0		Apparent Declination.	Greenwich Mean Time.	Hour Angle, H	Y	x'	y'	N.	S.
		$\Delta\alpha$	$\Delta\delta$		d h m	h m					
ν Leonis	5.0	-0.03	-4.6	+12 48.4	5 12 1.6	+ 9 2.3	+0.2307	0.5465	-0.1430	+50	-18
α Leonis (<i>Reg.</i>)	1.3	0.00	4.4	12 20.3	16 54.7	-10 14.0	+0.0212	0.5460	0.1486	+37	-29
45 Leonis	5.8	+0.11	4.4	10 9.0	6 2 11.4	+ 1 15.0	+0.9378	0.5450	0.1583	+90	+22
ϱ Leonis	3.8	0.13	4.4	9 41.8	4 40.8	+ 1 9.6	+1.0224	0.5448	0.1608	+90	+28
χ Leonis	4.7	0.28	3.9	7 44.8	20 14.3	- 7 46.7	+0.4819	0.5440	0.1743	+67	- 8
308 B. Leonis	5.8	+0.33	- 3.4	+ 8 28.5	7 0 34.2	- 3 35.1	-1.0519	0.5440	-0.1774	-27	-82
σ Leonis	4.1	0.38	3.8	6 26.7	4 0.6	- 0 15.2	+0.4806	0.5441	0.1798	+67	- 8
b Virginis	5.2	0.61	3.1	4 4.7	22 40.6	- 6 11.1	-0.4868	0.5455	0.1897	+ 8	-66
10 Virginis	6.2	0.68	3.4	+ 2 19.4	8 3 20.0	- 1 40.7	+0.4597	0.5462	0.1914	+65	-10
γ Virg. (<i>mean</i>)	2.9	0.87	3.3	- 1 2.0	18 31.8	-10 58.4	+1.0090	0.5496	0.1946	+89	+23
46 Virginis	6.1	+1.02	- 3.2	- 2 57.7	9 3 23.2	- 2 24.3	+1.2714	0.5522	-0.1948	+88	+48
48 Virginis	6.5	1.04	3.2	3 15.3	4 55.8	- 0 54.8	+1.2738	0.5528	0.1946	+87	+49
65 Virginis	6.0	1.17	2.8	4 31.7	13 54.5	+ 7 46.0	+0.8355	0.5562	0.1932	+86	+11
66 Virginis	5.7	1.18	2.8	4 46.1	14 28.2	+ 8 18.6	+0.9729	0.5564	0.1930	+86	+20
80 Virginis	5.6	1.25	2.3	5 0.6	19 29.8	-10 50.0	+0.2526	0.5585	0.1916	+50	-22
566 B. Virginis	6.4	+1.29	- 2.0	- 5 7.0	23 18.6	- 7 9.0	-0.3658	0.5603	-0.1901	+15	-58
88 Virginis	6.5	1.33	2.3	6 27.6	10 1 17.5	- 5 14.1	+0.6282	0.5612	0.1893	+78	- 1
598 B. Virginis	6.1	1.38	2.4	7 41.2	4 17.7	- 2 20.1	+1.3110	0.5627	0.1878	+80	+57
235 G. Virginis	6.5	1.52	1.2	7 11.2	14 32.4	+ 7 33.3	-1.0908	0.5681	0.1816	-31	-90
13 Libræ	5.7	1.77	0.7	11 35.4	11 6 18.3	- 1 14.5	+0.5952	0.5773	0.1678	+70	- 3
ξ^a Libræ	5.6	+1.78	- 0.4	-11 6.2	7 19.5	- 0 15.5	-0.0639	0.5780	-0.1667	+28	-40
17 Libræ	6.4	1.78	0.3	10 51.0	7 56.9	+ 0 20.6	-0.4224	0.5784	0.1661	+ 9	-62
18 Libræ	5.9	1.78	- 0.3	10 50.4	8 14.2	+ 0 37.3	-0.4811	0.5785	0.1658	+ 5	-67
130 B. Libræ	5.9	1.93	+ 0.7	12 5.9	18 44.0	+10 43.9	-0.8915	0.5851	0.1533	-20	-90
γ Libræ	4.0	2.02	0.7	14 32.2	23 31.9	- 8 39.0	+0.8257	0.5881	0.1468	+76	+11
190 B. Libræ	6.5	+2.06	+ 1.0	-14 48.0	12 2 46.2	- 5 32.2	+0.6201	0.5902	-0.1421	+70	- 1
η Libræ	5.5	2.08	0.9	15 25.9	3 2.1	- 5 16.8	+1.2122	0.5904	0.1417	+75	+45
195 B. Libræ	6.2	2.08	1.8	13 54.3	6 8.2	- 2 17.8	-0.7426	0.5923	0.1370	-13	-90
202 B. Libræ	6.4	2.11	2.0	14 10.6	7 59.9	- 0 30.4	-0.7235	0.5934	0.1341	-12	-90
203 B. Libræ	6.2	2.12	1.9	14 36.4	8 7.2	- 0 23.4	-0.3110	0.5936	0.1339	+11	-55
48 Libræ	4.6	+2.12	+ 2.1	-14 3.6	8 47.4	+ 0 15.2	-0.9444	0.5939	-0.1327	-26	-90
49 Libræ	5.4	2.14	1.4	16 18.6	9 39.1	+ 1 5.0	+1.1808	0.5944	0.1314	+74	+41
91 B. Scorpii	6.1	2.20	3.0	14 39.5	15 52.7	+ 7 4.1	-1.2470	0.5981	0.1209	-57	-90
φ Ophiuchi	4.4	2.28	3.4	16 26.8	21 55.3	-11 7.5	-0.1696	0.6015	0.1100	+16	-46
24 Scorpii	5.0	2.34	3.8	17 35.7	18 2 0.7	- 7 11.8	+0.5339	0.6037	0.1023	+59	- 6
78 B. Ophiuchi	6.5	+2.38	+ 4.9	-16 41.1	7 39.6	- 1 46.4	-0.9131	0.6065	-0.0911	-28	-90
90 B. Ophiuchi	6.5	2.41	4.7	18 7.8	9 5.0	- 0 24.4	+0.3889	0.6071	0.0882	+46	-14
29 Ophiuchi	6.4	2.43	4.8	18 46.4	9 53.8	+ 0 22.4	+0.9541	0.6075	0.0865	+72	+21
125 B. Ophiuchi	6.2	2.43	5.4	17 30.5	12 22.9	+ 2 45.4	-0.5056	0.6086	0.0813	- 5	-70
164 B. Ophiuchi	6.0	2.46	6.1	17 40.6	16 51.7	+ 7 3.4	-0.6820	0.6104	0.0717	-16	-90
192 B. Ophiuchi	6.3	+2.49	+ 6.3	-18 22.5	18 40.0	+ 8 47.3	-0.1181	0.6110	-0.0678	+15	-43
305 B. Ophiuchi	6.3	2.56	8.1	18 47.3	14 6 35.2	- 3 46.9	-0.3592	0.6143	0.0409	0	-59
16 G. Sagittarii	6.4	2.59	8.1	20 20.0	8 7.0	- 2 18.9	+1.1057	0.6146	0.0374	+70	+35
39 G. Sagittarii	6.3	2.60	8.8	19 51.3	12 22.8	+ 1 46.3	+0.4970	0.6153	0.0274	+49	- 8
16 Sagittarii	5.9	2.61	9.0	20 24.6	13 52.5	+ 3 12.4	+1.0050	0.6154	0.0239	+70	+26
64 B. Sagittarii	6.1	+2.58	+ 9.2	-18 41.0	14 0.5	+ 3 20.0	-0.7012	0.6155	-0.0236	-22	-90
52 G. Sagittarii	6.4	2.58	9.3	18 29.4	14 45.2	+ 4 2.8	-0.9096	0.6155	0.0218	-35	-90
17 H ¹ Sagittarii	6.4	2.58	9.4	18 38.8	15 13.3	+ 4 29.8	-0.7637	0.6156	0.0207	-25	-90
Y Sagit. (<i>var.</i>)	5.4	2.59	9.5	18 53.5	16 13.5	+ 5 27.5	-0.5416	0.6156	0.0184	-12	-74
21 Sagittarii	5.0	2.62	9.5	20 34.9	17 42.2	+ 6 52.5	+1.1005	0.6157	0.0148	+70	+35
95 B. Sagittarii	5.7	+2.60	+10.0	-18 46.5	19 33.5	+ 8 39.2	-0.7052	0.6158	-0.0104	-23	-90

496 ELEMENTS OF OCCULTATIONS, 1924.

JULY.

THE STAR'S					AT CONJUNCTION IN R.A.					Limiting Parallels.	
Name.	Mag.	Reductions from 1924.0		Apparent Declina- tion.	Greenwich Mean Time.	Hour Angle, H	P	z'	y'	N.	S.
		Δα	Δδ								
100 B. Sagittarii	5.0	+2.59	+10.1	-18 27.2	14 20 1.9	+ 9 6.5	-1.0278	0.6158	-0.0093	-44	-90
29 Sagittarii	5.3	2.63	10.9	20 24.6	15 2 54.0	- 8 18.5	+0.8957	0.6155	+0.0070	+70	+18
36 Sagittarii	5.1	2.63	11.3	20 45.2	5 48.0	- 5 31.7	+1.2668	0.6152	-0.0138	+70	+63
171 B. Sagittarii	6.1	2.61	11.7	19 21.2	7 59.3	- 3 25.8	-0.0811	0.6148	-0.0190	+13	-41
173 B. Sagittarii	6.4	2.61	11.7	19 12.6	8 0.6	- 3 24.6	-0.2223	0.6148	-0.0190	+ 5	-49
187 B. Sagittarii	6.4	+2.61	+11.9	-18 51.2	9 32.5	- 1 56.4	-0.5437	0.6146	+0.0226	-12	-74
190 B. Sagittarii	5.4	2.62	11.9	19 24.4	9 58.0	- 1 32.1	+0.0139	0.6144	-0.0236	+17	-35
195 B. Sagittarii	6.3	2.62	12.0	19 55.3	10 32.3	- 0 59.2	+0.5360	0.6143	-0.0249	+52	- 5
d Sagittarii	5.0	2.61	12.4	19 5.2	13 31.8	+ 1 53.0	-0.2051	0.6137	-0.0319	+ 7	-48
226 B. Sagittarii	6.4	2.61	12.6	19 22.4	15 2.6	+ 3 20.1	+0.1309	0.6133	-0.0354	+26	-28
g Sagittarii	4.0	+2.59	+12.6	-17 59.3	15 4.9	+ 3 22.3	-1.2399	0.6133	+0.0355	-64	-87
45 Sagittarii	6.0	2.60	12.6	18 26.8	15 8.3	+ 3 25.5	-0.7838	0.6133	-0.0356	-26	-90
266 B. Sagittarii	6.1	2.60	13.3	19 1.1	20 42.8	+ 8 46.4	+0.0158	0.6115	-0.0483	+21	-35
267 B. Sagittarii	5.8	2.59	13.3	18 23.8	20 57.6	+ 9 0.5	-0.5879	0.6115	-0.0489	-12	-78
f Sagittarii	5.1	2.59	13.6	19 56.5	16 0 31.5	-11 34.2	+1.1324	0.6101	-0.0568	+71	+38
57 Sagittarii	6.0	+2.58	+13.9	-19 14.1	2 47.0	- 9 24.1	+0.5659	0.6092	+0.0617	+58	- 4
π Capricorni	5.2	2.50	15.2	18 27.5	16 30.9	+ 3 46.8	+0.8424	0.6025	-0.0903	+72	+13
g Capricorni	5.0	2.50	15.2	18 3.7	17 7.7	+ 4 22.1	+0.5032	0.6021	-0.0915	+55	- 7
47 B. Capricorni	6.2	2.47	15.4	16 47.0	19 47.3	+ 6 55.4	-0.5234	0.6006	-0.0967	- 4	-72
v Capricorni	5.3	2.47	15.6	18 24.2	21 34.4	+ 8 38.3	+1.2717	0.5994	-0.1001	+72	+59
61 B. Capricorni	5.9	+2.45	+15.5	-16 23.5	21 47.6	+ 8 51.1	-0.7190	0.5993	+0.1005	-15	-90
94 B. Capricorni	5.7	2.41	15.9	16 19.2	17 44.0	- 8 31.6	-0.0555	0.5950	-0.1129	+23	-39
29 Capricorni	5.5	2.36	16.2	15 29.0	12 4.5	- 1 25.0	-0.0156	0.5900	-0.1253	+26	-37
42 Capricorni	5.1	2.26	16.2	14 23.0	22 51.4	+ 8 57.8	+0.3121	0.5823	-0.1414	+48	-19
44 Capricorni	6.0	2.26	16.5	14 44.6	23 29.7	+ 9 34.7	+0.7685	0.5819	-0.1422	+76	+ 8
45 Capricorni	5.8	+2.26	+16.6	-15 5.6	23 53.5	+ 9 57.6	+1.1809	0.5815	+0.1428	+75	+40
151 B. Capricorni	6.1	2.23	16.3	13 4.4	18 2 18.9	-11 42.2	-0.5199	0.5798	-0.1460	+ 1	-71
μ Capricorni	5.2	2.23	16.4	13 54.4	3 50.4	-10 14.1	+0.5503	0.5787	-0.1479	+64	- 5
e Aquarii	5.4	2.15	16.2	11 56.1	11 20.8	- 2 59.8	-0.3131	0.5733	-0.1568	+14	-55
σ Aquarii	4.9	2.07	15.9	11 3.8	20 10.5	+ 5 31.2	+0.2188	0.5669	-0.1658	+44	-24
58 Aquarii	6.4	+2.07	+16.0	-11 17.5	20 38.1	+ 5 57.9	+0.5296	0.5666	+0.1662	+65	- 7
213 B. Aquarii	6.5	2.03	15.3	8 42.3	19 1 44.9	+10 54.1	-1.2707	0.5630	-0.1706	-52	-90
λ Aquarii	3.8	1.99	15.1	7 58.8	6 5.2	- 8 54.5	-1.2750	0.5600	-0.1740	-53	-90
81 Aquarii	6.4	1.95	14.8	7 27.9	10 6.6	- 5 1.2	-1.1052	0.5574	-0.1768	-32	-90
h Aquarii	5.4	1.94	14.9	8 6.0	11 50.3	- 3 21.0	-0.1411	0.5563	-0.1778	+26	-44
φ Aquarii	4.4	+1.90	+14.2	- 6 27.3	16 5.8	+ 0 46.0	-1.0888	0.5563	+0.1803	-31	-90
χ Aquarii	5.3	1.88	14.7	8 8.2	17 16.5	+ 1 54.4	+0.8743	0.5528	-0.1809	+82	+14
317 B. Aquarii	6.3	1.87	14.1	6 19.2	19 4.6	+ 3 39.0	-0.6922	0.5517	-0.1819	- 4	-88
24 Piscium	6.1	1.74	12.6	3 34.4	20 10 26.2	- 5 29.2	-0.7341	0.5431	-0.1874	- 5	-90
27 Piscium	5.1	1.71	12.6	3 58.4	13 13.6	- 2 47.0	+0.2106	0.5417	-0.1879	+47	-24
29 Piscium	5.1	+1.70	+12.4	- 3 26.8	14 45.5	- 1 18.1	-0.0575	0.5410	+0.1882	+32	-39
4 Ceti	6.3	1.68	12.0	2 58.1	17 38.6	+ 1 29.6	-0.0196	0.5396	-0.1887	+34	-37
5 Ceti	6.3	1.68	12.0	2 52.0	17 52.4	+ 1 43.0	-0.0836	0.5395	-0.1887	+30	-41
54 B. Ceti	6.3	1.60	11.4	2 38.2	21 1 54.2	+ 9 29.8	+1.1919	0.5360	-0.1891	+88	+39
10 Ceti	6.4	1.61	10.6	0 28.0	2 57.1	+10 30.7	-0.9162	0.5356	-0.1891	-17	-90
14 Ceti	5.4	+1.56	+10.5	- 0 55.2	7 23.5	- 9 11.1	+0.4047	0.5340	+0.1889	+60	-14
26 Ceti	6.0	1.44	8.8	+ 0 57.7	21 37.2	+ 4 36.8	+1.0679	0.5296	-0.1864	+90	+28
33 Ceti	6.1	1.42	8.2	+ 2 2.6	22 1 2.7	+ 7 56.0	+0.5422	0.5287	-0.1855	+72	- 6
f Piscium	5.3	1.39	7.5	3 13.0	4 43.8	+11 30.5	-0.0409	0.5280	-0.1842	+34	-37
117 G. Piscium	6.5	1.34	7.2	3 8.6	9 22.4	- 7 59.3	+0.8903	0.5271	-0.1825	+90	+15
v Piscium	4.7	+1.29	+ 5.9	+ 5 6.3	16 49.0	- 0 45.9	+0.1123	0.5260	+0.1791	+42	-29

ELEMENTS OF OCCULTATIONS, 1924. 497

JULY.

THE STAR'S					AT CONJUNCTION IN R.A.					Limiting Parallels.	
Name.	Mag.	Reductions from 1924.0		Apparent Declina- tion.	Greenwich Mean Time.	Hour Angle, H	Y	x'	y'	N.	S.
		$\Delta\alpha$	$\Delta\delta$								
39 B. Arietis	6.5	+1.20	+4.1	+7 22.4	23 4 50.6	+10 54.3	-0.2407	0.5252	+0.1724	+23	-48
64 Ceti	5.8	+1.18	3.5	8 12.9	8 11.6	-9 50.7	-0.5881	0.5252	+0.1702	+4	-73
51 Ceti	4.5	+1.17	3.4	8 29.5	9 2.1	-9 1.6	-0.7469	0.5251	+0.1697	-6	-82
25 Arietis	6.5	+1.10	2.2	9 51.7	16 26.7	-1 50.2	-1.0113	0.5253	+0.1644	-24	-81
52 Ceti	4.3	+1.09	2.9	8 7.3	16 50.5	-1 27.0	+0.9030	0.5253	+0.1642	+90	+23
389 B. Ceti	6.3	+1.10	+2.5	+9 13.7	17 34.2	-0 44.6	-0.1311	0.5253	+0.1636	+29	-40
85 Ceti	6.3	+1.04	1.5	10 25.1	24 0 11.4	+5 40.7	-0.3733	0.5258	+0.1584	+15	-55
μ Ceti	4.4	+1.04	+1.6	9 47.7	1 26.8	+6 54.0	+0.5115	0.5259	+0.1573	+69	-5
147 B. Arietis	5.8	+0.96	-0.3	12 53.7	12 25.3	-6 27.2	-1.2287	0.5272	+0.1475	-45	-78
8 B. Tauri	6.2	+0.86	-0.8	12 21.7	21 29.3	+2 20.5	+0.6577	0.5288	+0.1386	+85	+6
f Tauri	4.3	+0.83	-1.2	+12 40.6	25 0 53.4	+5 38.5	+0.7741	0.5294	+0.1350	+90	+14
179 B. Tauri	5.9	+0.68	3.2	14 57.6	19 24.1	-0 24.4	+0.5551	0.5338	+0.1136	+74	+3
48 Tauri	6.3	+0.64	3.5	15 12.6	23 25.5	+3 29.5	+0.7236	0.5349	+0.1085	+90	+14
γ Tauri	3.9	+0.62	3.7	15 26.7	26 1 25.4	+5 25.7	+0.6791	0.5354	+0.1059	+89	+11
δ Tauri	3.9	+0.62	4.4	17 21.9	2 57.3	+6 54.8	-1.2887	0.5358	+0.1040	-63	-73
63 Tauri	5.7	+0.62	-4.2	+16 36.0	3 12.4	+7 9.4	-0.4152	0.5359	+0.1036	+13	-51
64 Tauri	4.9	+0.62	4.4	17 16.1	3 32.0	+7 28.5	-1.1221	0.5360	+0.1032	-35	-73
70 Tauri	6.4	+0.60	4.0	15 46.0	4 18.7	+8 13.7	+0.6215	0.5362	+0.1022	+81	+8
71 Tauri	4.6	+0.59	3.9	15 26.8	4 40.5	+8 34.9	+1.0150	0.5363	+0.1017	+90	+34
75 Tauri	5.2	+0.58	4.2	16 11.4	5 42.3	+9 34.7	+0.2944	0.5365	+0.1003	+54	-10
θ^1 Tauri	4.2	+0.58	-4.0	+15 47.6	5 46.4	+9 38.7	+0.7405	0.5366	+0.1002	+90	+14
θ^a Tauri	3.6	+0.58	4.0	15 42.2	5 49.1	+9 41.4	+0.8460	0.5366	+0.1002	+90	+22
80 Tauri	5.8	+0.57	4.0	15 28.3	6 33.2	+10 24.1	+1.1747	0.5368	+0.0992	+90	+49
264 B. Tauri	4.8	+0.58	4.2	16 1.7	6 45.2	+10 35.7	+0.5774	0.5368	+0.0989	+77	+6
81 Tauri	5.5	+0.57	4.0	15 31.6	6 48.2	+10 38.6	+1.1392	0.5368	+0.0989	+90	+45
85 Tauri	6.0	+0.57	-4.1	+15 41.3	7 24.1	+11 13.4	+1.0183	0.5370	+0.0981	+90	+35
275 B. Tauri	6.5	+0.56	4.3	16 9.8	8 16.4	+11 55.9	+0.5765	0.5373	+0.0969	+76	+6
α Tauri (Ald.)	1.1	+0.55	4.5	16 21.4	9 23.8	-10 50.7	+0.4708	0.5376	+0.0954	+67	+1
89 Tauri	5.8	+0.54	4.4	15 52.9	10 30.4	-9 46.1	+1.1030	0.5379	+0.0938	+90	+42
σ^a Tauri	4.9	+0.54	4.4	15 46.0	11 3.5	-9 14.0	+1.2806	0.5380	+0.0931	+81	+66
318 B. Tauri	5.7	+0.46	-5.2	+17 2.1	19 55.2	-0 38.9	+0.6457	0.5406	+0.0806	+85	+12
m Tauri	5.0	+0.45	5.8	18 32.6	20 47.1	+4 3.8	-0.6523	0.5419	+0.0734	-1	-67
111 Tauri	5.1	+0.36	5.8	17 18.8	9 2.2	-11 56.7	+1.2656	0.5442	+0.0609	+81	+67
115 Tauri	5.3	+0.34	6.0	17 53.8	10 21.8	-10 39.7	+0.6978	0.5445	+0.0589	+90	+17
119 Tauri	4.9	+0.32	6.2	18 32.2	12 46.9	-8 19.2	+0.1259	0.5452	+0.0551	+43	-14
120 Tauri	5.6	+0.32	-6.2	+18 29.1	13 24.9	-7 42.4	+0.2176	0.5453	+0.0541	+49	-9
B. D.+19° IIII	6.0	+0.25	6.8	19 50.8	22 25.6	+1 1.0	-0.8663	0.5476	+0.0397	-15	-71
57 Orionis	5.8	+0.24	6.8	19 44.0	23 38.8	+2 11.9	-0.6936	0.5479	+0.0377	-4	-68
64 Orionis	5.1	+0.20	6.9	19 41.5	28 3.42	+6 7.1	-0.5064	0.5489	+0.0310	+7	-50
χ^a Orionis	4.7	+0.20	7.0	20 8.4	3 54.8	+6 19.5	-0.9955	0.5490	+0.0307	-25	-70
68 Orionis	5.7	+0.17	-7.0	+19 48.4	7 45.8	+10 3.1	-0.5214	0.5498	+0.0243	+6	-51
19 B. Geminorum	6.2	+0.17	6.8	18 42.0	8 30.4	+10 46.2	+0.7192	0.5500	+0.0231	+90	+23
71 Orionis	5.1	+0.16	7.0	19 10.9	9 7.0	+11 21.6	+0.2006	0.5500	+0.0220	+48	-6
16 Geminorum	6.2	+0.12	7.2	20 32.5	15 16.9	-6 40.5	-1.1952	0.5513	+0.0117	-46	-70
ν Geminorum	4.1	+0.12	-7.2	+20 15.6	15 45.9	-6 12.5	-0.8792	0.5514	+0.0109	-17	-70
NEW MOON.											

AUGUST.

$$\begin{array}{l} \text{45 Leonis } | 5.8 | +0.02 | -3.6 | +10.9 | 0.2 \\ \quad \quad \quad | 7.54 | +6.14 | +1.0027 | 0.5493 | -0.1588 | +90 | +27 \\ \text{32-24 } \qquad \qquad (\text{NAUTICAL ALMANAC, 1924.}) \qquad \qquad \qquad 2 K \end{array}$$

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AUGUST.

THE STAR'S					AT CONJUNCTION IN R.A.					Limiting Parallels.	
Name.	Mag.	Reductions from 1924.0		Apparent Declination.	Greenwich Mean Time.	Hour Angle, H	Y	x'	y'	N.	S.
		$\Delta\alpha$	$\Delta\delta$								
		s	"	+ ° ' "	d h m	h m				+ ° ' "	+ ° ' "
MERCURY	0.2	..	..	+ 9 59.0	2 9 9.4	+ 7 27.8	+0.09808	0.4947	-0.1314	+90	+27
9 Leonis	3.8	+0.03	-3.6	9 41.8	10 21.7	+ 8 37.8	+1.0891	0.5491	0.1612	+90	+34
7 Leonis	4.7	0.12	2.9	7 44.8	3 1 45.6	- 0 28.1	+0.5621	0.5478	0.1748	+74	-3
308 B. Leonis	5.8	0.15	2.5	8 28.6	6 3 3	+ 3 41.3	-0.9660	0.5475	0.1779	-20	-82
5 Leonis	4.1	0.19	2.6	6 26.7	9 28.0	+ 6 59.5	+0.5660	0.5473	0.1803	+74	-3
b Virginis	5.2	+0.36	-1.8	+ 4 4.7	4 4 1.9	+ 0 57.6	-0.3915	0.5474	-0.1900	+14	-59
10 Virginis	6.2	0.42	2.0	+ 2 19.4	8 40.6	+ 5 27.4	+0.5576	0.5477	0.1915	+73	-5
7 Virg. (mean)	2.9	0.57	1.6	- 1 2.0	23 53.2	- 3 49.6	+1.1142	0.5495	0.1943	+89	+31
65 Virginis	6.0	0.84	1.1	4 31.7	5 19 23.8	- 8 57.4	+0.9445	0.5539	0.1924	+86	+18
66 Virginis	5.7	0.86	1.2	4 46.1	19 57.8	- 8 24.5	+1.0828	0.5540	0.1922	+86	+29
80 Virginis	5.6	+0.91	-0.7	- 5 0.6	6 1 2.9	- 3 29.5	+0.3581	0.5556	-0.1905	+57	-16
566 B. Virginis	6.4	0.95	0.4	5 7.0	4 54.7	+ 0 14.5	-0.2650	0.5569	0.1890	+21	-52
88 Virginis	6.5	0.99	-0.7	6 27.5	6 55.3	+ 2 11.1	+0.7364	0.5576	0.1881	+84	+5
235 G. Virginis	6.5	1.17	+0.3	7 11.2	20 23.7	- 8 47.9	-1.0006	0.5628	0.1801	-24	-90
13 Libræ	5.7	1.42	0.6	11 35.3	7 12 30.5	+ 6 45.2	+0.6977	0.5703	0.1661	+78	+3
ξ ^a Libræ	5.6	+1.43	+0.9	-11 6.2	13 33.3	+ 7 45.7	+0.0306	0.5708	-0.1650	+33	-34
17 Libræ	6.4	1.44	1.0	10 51.0	14 11.6	+ 8 22.7	-0.3325	0.5711	0.1643	+14	-56
18 Libræ	5.9	1.44	1.0	10 50.4	14 29.4	+ 8 39.9	-0.3920	0.5713	0.1640	+10	-60
130 B. Libræ	5.9	1.60	1.8	12 5.9	8 1 16.0	- 4 56.7	-0.8131	0.5768	0.1515	-15	-90
7 Libræ	4.0	1.70	1.6	14 32.2	6 12.1	- 0 11.3	+0.9245	0.5794	0.1450	+76	+18
190 B. Libræ	6.5	+1.74	+1.9	-14 48.0	9 32.2	+ 3 1.5	+0.7145	0.5812	-0.1404	+76	+4
195 B. Libræ	6.2	1.77	2.7	13 54.3	13 0.2	+ 6 21.8	-0.6690	0.5830	0.1353	-9	-87
202 B. Libræ	6.4	1.80	2.8	14 10.6	14 55.3	+ 8 12.7	-0.6508	0.5840	0.1325	-8	-85
203 B. Libræ	6.2	1.81	2.7	14 36.4	15 2.5	+ 8 20.0	-0.6327	0.5841	0.1323	+16	-50
48 Libræ	4.6	1.81	3.0	14 3.6	15 44.3	+ 8 59.8	-0.8754	0.5845	0.1312	-21	-90
49 Libræ	5.4	+1.83	+2.1	-16 18.6	16 37.6	+ 9 51.1	+1.2796	0.5849	-0.1299	+74	+57
91 B. Scorpii	6.1	1.91	3.8	14 39.5	23 3.0	+ 7 57.8	-1.1871	0.5883	0.1195	-49	-90
φ Ophiuchi	4.4	2.02	4.0	16 26.8	9 5 17.4	+ 1 57.7	-0.0980	0.5914	0.1088	+20	-42
24 Scorpii	5.0	2.09	4.2	17 35.7	9 30.7	+ 2 5.9	+0.6133	0.5934	0.1011	+65	-1
78 B. Ophiuchi	6.5	2.15	5.3	16 41.1	15 20.8	+ 7 42.3	-0.8592	0.5961	0.0902	-25	-90
90 B. Ophiuchi	6.5	+2.18	+5.0	-18 7.8	16 49.0	+ 9 7.3	+0.4613	0.5968	-0.0873	+51	-10
29 Ophiuchi	6.4	2.20	5.0	18 46.4	17 39.4	+ 9 55.7	+1.0344	0.5972	0.0856	+72	+28
125 B. Ophiuchi	6.2	2.21	5.7	17 30.5	20 13.4	-11 36.4	-0.4490	0.5982	0.0806	-1	-65
164 B. Ophiuchi	6.0	2.26	6.4	17 40.6	10 0 51.0	- 7 9.7	-0.6311	0.6001	0.0712	-13	-83
192 B. Ophiuchi	6.3	2.30	6.4	18 22.5	2 42.8	- 5 22.3	-0.0602	0.6008	0.0673	+18	-39
305 B. Ophiuchi	6.3	+2.42	+8.1	-18 47.3	15 0.8	+ 6 26.5	-0.3134	0.6045	-0.0409	+2	-55
16 G. Sagittarii	6.4	2.47	7.9	20 20.0	16 35.5	+ 7 57.4	+1.1710	0.6048	0.0375	+70	+43
39 G. Sagittarii	6.3	2.49	8.6	19 51.3	20 59.0	-11 49.7	+0.5503	0.6057	0.0277	+54	-4
16 Sagittarii	5.9	2.52	8.7	20 24.6	22 31.4	-10 20.9	+1.0641	0.6060	0.0242	+70	+31
64 B. Sagittarii	6.1	2.49	9.2	18 41.0	22 39.7	-10 13.0	-0.6656	0.6060	0.0239	-20	-89
52 G. Sagittarii	6.4	+2.49	+9.4	-18 29.4	23 25.7	- 9 28.9	-0.8773	0.6061	-0.0222	-33	-90
17 H. Sagittarii	6.4	2.50	9.4	18 38.8	23 54.6	- 9 1.1	-0.7297	0.6062	0.0211	-23	-90
Y Sagitt. (var.)	5.4	2.51	9.5	18 53.5	11 0 56.6	- 8 1.5	-0.5053	0.6063	0.0188	-10	-70
21 Sagittarii	5.0	2.55	9.3	20 34.9	2 27.9	- 6 33.9	+1.1573	0.6066	0.0154	+70	+41
95 B. Sagittarii	5.7	2.54	10.0	18 46.5	4 22.3	- 4 44.1	-0.6736	0.6068	0.0110	-21	-90
100 B. Sagittarii	5.0	+2.53	+10.1	-18 27.2	4 51.5	- 4 16.0	-1.0007	0.6068	-0.0099	-42	-90
29 Sagittarii	5.3	2.61	10.7	20 24.6	11 55.0	+ 2 30.5	+0.9422	0.6072	+0.0061	+70	+21
171 B. Sagittarii	6.1	2.63	11.6	19 21.2	17 8.1	+ 7 31.0	-0.0507	0.6070	0.0180	+14	-39
173 B. Sagittarii	6.4	2.63	11.6	19 12.6	17 9.5	+ 7 32.3	-0.1935	0.6070	0.0180	+7	-48
187 B. Sagittarii	6.4	2.63	11.9	18 51.2	18 43.7	+ 9 2.8	-0.5198	0.6069	0.0216	-11	-72
190 B. Sagittarii	5.4	+2.64	+11.9	-19 24.4	19 9.8	+ 9 27.7	+0.0439	0.6068	+0.0225	+20	-33

ELEMENTS OF OCCULTATIONS, 1924. 499

AUGUST.

THE STAR'S					AT CONJUNCTION IN R.A.					Limiting Parallels.	
Name.	Mag.	Reductions from 1924.0		Apparent Declina- tion.	Greenwich Mean Time.	Hour Angle, H	P	z'	y'	N.	S.
		$\Delta\alpha$	$\Delta\delta$								
195 B. Sagittarii	6.3	+2.65	+11.8	-19 55.3	11 19 45.0	+10 1.5	+0.5716	0.6068	+0.0239	+55	- 0
d Sagittarii	5.0	2.65	12.4	19 5.2	22 48.6	-11 2.2	-0.1803	0.6065	0.0308	+ 8	-47
226 B. Sagittarii	6.4	2.66	12.6	19 22.4	12 0 21.6	- 9 32.9	+0.1583	0.6062	0.0342	+27	-27
e Sagittarii	4.0	2.64	12.8	17 59.3	0 23.9	- 9 30.7	-1.2275	0.6062	0.0343	-63	-89
45 Sagittarii	6.0	2.66	12.7	18 26.8	0 27.4	- 9 27.4	-0.7664	0.6062	0.0344	-25	-90
266 B. Sagittarii	6.1	+2.68	+13.3	-19 1.1	6 9.2	- 3 59.2	+0.0376	0.6053	+0.0470	+21	-34
267 B. Sagittarii	5.8	2.68	13.5	18 23.8	6 24.2	- 3 44.7	-0.5723	0.6052	0.0476	-11	-77
f Sagittarii	5.1	2.70	13.6	19 56.5	10 2.5	+ 0 15.3	+1.1619	0.6043	0.0555	+71	+41
57 Sagittarii	6.0	2.70	14.0	19 14.1	12 20.5	+ 1 57.3	+0.5881	0.6037	0.0604	+59	- 2
π Capricorni	5.2	2.72	15.6	18 27.4	13 2 17.4	- 8 38.6	+0.8550	0.5988	0.0890	+72	+14
q Capricorni	5.0	+2.71	+15.7	-18 3.7	2 54.7	- 8 2.8	+0.5130	0.5985	+0.0903	+56	- 7
47 B. Capricorni	6.2	2.70	16.0	16 47.0	5 36.3	- 5 27.5	-0.5223	0.5974	0.0955	- 4	-72
v Capricorni	5.3	2.72	16.0	18 24.2	7 24.6	- 3 43.4	+1.2826	0.5966	0.0988	+72	+63
61 B. Capricorni	5.9	2.70	16.3	16 23.5	7 37.9	- 3 30.5	-0.7203	0.5964	0.0993	-16	-90
94 B. Capricorni	5.7	2.70	16.8	16 19.2	14 35.2	+ 3 10.7	-0.0577	0.5930	0.1119	+23	-39
29 Capricorni	5.5	+2.68	+17.3	-15 29.0	22 1.6	+10 20.2	-0.0226	0.5891	+0.1245	+26	-37
42 Capricorni	5.1	2.64	17.7	14 22.9	14 8 50.3	- 3 15.2	+0.2987	0.5829	0.1408	+47	-19
44 Capricorni	6.0	2.65	17.9	14 44.6	9 28.6	- 2 38.3	+0.7553	0.5825	0.1417	+76	+ 7
45 Capricorni	5.8	2.65	17.9	15 5.6	9 52.5	- 2 15.3	+1.1681	0.5823	0.1423	+75	+39
151 B. Capricorni	6.1	2.63	18.0	13 4.4	12 17.9	+ 0 4.8	-0.5366	0.5808	0.1456	0	-72
μ Capricorni	5.2	+2.64	+18.1	-13 54.3	13 49.3	+ 1 32.9	+0.5337	0.5799	+0.1476	+63	- 6
e Aquarii	5.4	2.60	18.2	11 56.0	21 18.5	+ 8 45.9	-0.3346	0.5753	0.1568	+12	-56
σ Aquarii	4.9	2.56	18.2	11 3.7	15 6 5.2	- 6 46.0	+0.1920	0.5700	0.1662	+43	-25
58 Aquarii	6.4	2.56	18.2	11 17.4	6 32.6	- 6 19.5	+0.5019	0.5697	0.1666	+63	- 8
213 B. Aquarii	6.5	2.53	18.1	8 42.3	11 37.0	- 1 25.7	-1.2971	0.5666	0.1713	-57	-86
λ Aquarii	3.8	+2.51	+18.0	- 7 58.8	15 54.7	+ 2 43.1	-1.3026	0.5640	+0.1748	-58	-85
81 Aquarii	6.4	2.49	17.8	7 27.9	19 53.5	+ 6 33.8	-1.1347	0.5617	0.1777	-35	-90
h Aquarii	5.4	2.49	17.9	8 6.0	21 36.1	+ 8 12.9	-0.1749	0.5608	0.1789	+24	-46
φ Aquarii	4.4	2.46	17.5	6 27.2	18 1 48.5	-11 43.2	-1.1204	0.5583	0.1815	-34	-90
χ Aquarii	5.3	2.45	17.7	8 8.2	2 58.2	-10 35.9	+0.8339	0.5577	0.1822	+82	+11
317 B. Aquarii	6.3	+2.44	+17.4	- 6 19.1	4 44.9	- 8 52.7	-0.7263	0.5567	+0.1832	- 6	-90
24 Piscium	6.1	2.37	16.4	3 34.4	19 52.6	+ 5 45.2	-0.7726	0.5488	0.1891	- 9	-90
27 Piscium	5.1	2.35	16.2	3 58.4	22 37.2	+ 8 24.5	+0.1656	0.5476	0.1897	+45	-27
29 Piscium	5.1	2.34	16.1	3 26.8	17 0 7.5	+ 9 51.8	-0.1013	0.5469	0.1900	+30	-42
4 Ceti	6.3	2.33	15.9	2 58.0	2 57.6	-11 23.5	-0.0645	0.5456	0.1905	+32	-40
5 Ceti	6.3	+2.33	+15.9	- 2 52.0	3 11.2	-11 10.3	-0.1281	0.5455	+0.1905	+28	-43
54 B. Ceti	6.3	2.27	15.2	2 38.1	11 4.3	- 3 32.2	+1.1366	0.5422	0.1911	+88	+33
10 Ceti	6.4	2.29	14.8	0 28.0	12 6.2	- 2 32.4	-0.9570	0.5418	0.1911	-20	-90
14 Ceti	5.4	2.25	14.5	- 0 55.1	16 27.6	+ 1 40.9	+0.3537	0.5401	0.1909	+56	-17
26 Ceti	6.0	2.16	13.1	+ 0 57.8	18 6 25.4	- 8 47.1	+1.0098	0.5356	0.1885	+90	+24
33 Ceti	6.1	+2.14	+12.6	+ 2 2.7	9 47.1	- 5 31.7	+0.4877	0.5347	+0.1875	+67	- 9
f Piscium	5.3	2.13	11.9	3 13.1	13 24.0	- 2 1.4	-0.0912	0.5338	0.1862	+31	-40
117 G. Piscium	6.5	2.09	11.6	3 8.7	17 57.5	+ 2 23.8	+0.8328	0.5328	0.1844	+90	+12
v Piscium	4.7	2.06	10.4	5 6.4	19 1 16.1	+ 9 29.0	+0.0606	0.5315	0.1810	+39	-32
39 B. Arietis	6.5	1.99	8.6	7 22.4	13 5.7	- 3 2.8	-0.2893	0.5300	0.1741	+20	-51
64 Ceti	5.8	+1.96	+ 7.9	+ 8 13.0	16 23.5	+ 0 9.0	-0.6342	0.5297	+0.1719	+ 1	-77
ξ^1 Ceti	4.5	1.96	7.8	8 29.6	17 13.2	+ 0 57.2	-0.7918	0.5297	0.1713	- 9	-82
25 Arietis	6.5	1.91	6.5	9 51.8	20 0 31.3	+ 8 2.2	-1.0539	0.5294	0.1659	-27	-81
ξ^2 Ceti	4.3	1.90	7.2	8 7.3	0 54.8	+ 8 25.0	+0.9075	0.5294	0.1656	+90	+19
389 B. Ceti	6.3	1.90	6.8	9 13.7	1 37.8	+ 9 6.7	-0.1793	0.5294	0.1650	+26	-43
85 Ceti	6.3	+1.86	+ 5.7	+10 25.2	8 9.8	- 8 33.1	-0.4192	0.5294	+0.1596	+13	-58

500 ELEMENTS OF OCCULTATIONS, 1924.

AUGUST.

THE STAR'S					AT CONJUNCTION IN R.A.					Limiting Parallels.	
Name.	Mag.	Reductions from 1924.0		Apparent Declina- tion.	Greenwich Mean Time.	Hour Angle, H	Y	x'	y'	N.	S.
		$\Delta\alpha$	$\Delta\delta$								
μ Ceti	4.4	+1.85	+5.8	+9 47.8	20 9 24.2	-7 21.0	+0.4604	0.5294	+0.1585	+05	-8
147 B. Arietis	5.8	1.78	3.6	12 53.8	20 15.2	+3 10.4	-1.2682	0.5299	0.1485	-51	-78
8 B. Tauri	6.2	1.68	3.0	12 21.7	21 5 14.1	+11 53.1	+0.6102	0.5308	0.1393	+79	+3
f Tauri	4.3	1.65	+2.6	12 40.7	8 36.5	-8 50.7	+0.7270	0.5312	0.1357	+90	+11
179 B. Tauri	5.9	1.50	0.0	14 57.6	22 3 0.7	+8 59.9	+0.5141	0.5343	0.1139	+70	+1
48 Tauri	6.3	+1.46	-0.4	+15 12.7	7 1.2	-11 6.9	+0.6834	0.5351	+0.1088	+90	+12
7 Tauri	3.9	1.44	0.7	15 26.7	9 0.7	-9 11.2	+0.6395	0.5354	0.1062	+84	+9
58 Tauri	5.4	1.42	0.6	14 54.9	9 25.3	-8 47.4	+1.2696	0.5356	0.1057	+85	+62
63 Tauri	5.7	1.43	1.3	16 36.0	10 47.4	-7 27.8	-0.4511	0.5358	0.1039	+11	-54
64 Tauri	4.9	1.44	1.6	17 16.1	11 7.0	-7 8.8	-1.1558	0.5359	0.1034	-39	-73
70 Tauri	6.4	+1.41	-1.1	+15 46.1	11 53.6	-6 23.6	+0.5831	0.5360	+0.1024	+77	+6
71 Tauri	4.6	1.40	1.0	15 26.8	12 15.3	-6 2.6	+0.9755	0.5361	0.1019	+90	+31
75 Tauri	5.2	1.40	1.3	16 11.4	13 17.0	-5 2.8	+0.2573	0.5364	0.1006	+51	-12
θ^1 Tauri	4.2	1.40	1.2	15 47.7	13 21.1	-4 58.9	+0.7021	0.5364	0.1005	+90	+13
θ^2 Tauri	3.6	1.39	1.2	15 42.2	13 23.8	-4 56.2	+0.8074	0.5364	0.1004	+90	+19
80 Tauri	5.8	+1.38	-1.2	+15 28.4	14 7.8	-4 13.6	+1.1355	0.5365	+0.0994	+90	+45
264 B. Tauri	4.8	1.39	1.4	16 1.8	14 19.8	-4 1.9	+0.5398	0.5366	0.0991	+73	+4
81 Tauri	5.5	1.38	1.2	15 31.6	14 22.8	-3 59.0	+1.1001	0.5366	0.0991	+90	+42
85 Tauri	6.0	1.38	1.3	15 41.4	14 58.6	-3 24.3	+0.9798	0.5367	0.0983	+90	+32
275 B. Tauri	6.5	1.37	1.6	16 9.9	15 50.8	-2 33.7	+0.5394	0.5369	0.0971	+73	+4
α Tauri (<i>Ald.</i>)	1.1	+1.36	-1.8	+16 21.4	16 58.1	-1 28.6	+0.4343	0.5372	+0.0955	+64	-2
89 Tauri	5.8	1.35	1.7	15 52.9	18 4.6	-0 24.1	+1.0653	0.5374	0.0940	+90	+39
σ^2 Tauri	4.9	1.34	1.7	15 46.1	18 37.7	+0 8.0	+1.2427	0.5375	0.0932	+90	+58
318 B. Tauri	5.7	1.25	2.8	17 2.1	23 32.0	+8 42.6	+0.6119	0.5396	0.0807	+81	+9
m Tauri	5.0	1.24	3.7	18 32.6	8 21.0	-10 34.6	-0.6822	0.5407	0.0735	-3	-69
111 Tauri	5.1	+1.12	-3.9	+17 18.8	16 36.7	-2 34.6	+1.2348	0.5426	+0.0610	+89	+61
115 Tauri	5.3	1.10	4.2	17 53.8	17 56.4	-1 17.5	+0.6683	0.5430	0.0589	+89	+16
119 Tauri	4.9	1.08	4.6	18 32.3	20 21.8	+1 3.3	+0.0979	0.5435	0.0552	+42	-16
120 Tauri	5.6	1.07	4.6	18 29.2	20 59.8	+1 40.1	+0.1898	0.5436	0.0542	+47	-11
B. D. +19° 1110	6.0	0.98	5.6	19 50.9	24 6 1.8	+10 24.8	-0.8906	0.5458	0.0398	-17	-71
57 Orionis	5.8	+0.97	-5.6	+19 44.1	7 15.2	+11 35.8	-0.7177	0.5460	+0.0378	-6	-70
64 Orionis	5.1	0.92	5.8	19 41.5	11 18.9	-8 28.3	-0.5297	0.5469	0.0312	+6	-52
γ^2 Orionis	4.7	0.93	6.0	20 8.4	11 31.8	-8 15.8	-1.0182	0.5470	0.0308	-27	-70
68 Orionis	5.7	0.88	6.1	19 48.4	15 23.4	-4 31.7	-0.5436	0.5478	0.0245	+5	-53
19 B. Geminorum	6.2	0.86	5.8	18 42.0	16 8.1	-3 48.4	+0.6958	0.5479	0.0232	+90	+21
71 Orionis	5.1	+0.86	-6.1	+19 10.9	16 44.8	-3 12.9	+0.1779	0.5481	+0.0222	+47	-8
16 Geminorum	6.2	0.80	6.6	20 32.5	22 55.7	+2 46.0	-1.2148	0.5493	0.0118	-49	-70
v Geminorum	4.1	0.80	6.6	20 15.6	23 24.8	+3 14.0	-0.8991	0.5494	+0.0110	-18	-70
VENUS	-4.1	..	..	18 24.6	25 23 27.7	+2 29.8	+0.9097	0.5179	-0.0295	+90	+34
f Geminorum	5.3	0.46	6.7	17 50.8	26 8 31.5	+11 15.6	+1.1749	0.5542	0.0455	+90	+54
g Geminorum	5.0	+0.43	-7.0	+18 41.7	11 36.9	-9 45.1	+0.1005	0.5544	-0.0508	+41	-15
209 B. Geminorum	6.2	0.41	7.1	19 31.1	14 18.9	-7 8.4	-0.9407	0.5546	0.0553	-21	-71
3 Cancri	5.7	0.38	6.7	17 31.0	18 27.5	-3 8.1	+0.9958	0.5549	0.0623	+90	+37
10 H. Cancri	6.1	0.36	7.0	19 3.4	20 17.1	-1 22.2	-0.7952	0.5550	0.0654	-10	-71
ζ Can. (mean)	4.7	0.34	6.8	17 52.6	23 46.0	+1 59.8	+0.2489	0.5552	0.0712	+51	-9
d ¹ Cancri	5.9	+0.30	-6.8	+18 34.5	27 4 57.0	+7 0.6	-0.8997	0.5554	-0.0797	-17	-72
d ² Cancri	6.2	0.28	6.7	17 17.8	6 7.2	+8 8.5	+0.3922	0.5554	0.0816	+61	-2
θ Cancri	5.5	0.27	6.8	18 21.0	8 47.0	+10 42.9	-0.9718	0.5555	0.0859	-23	-72
54 Cancri	6.3	0.22	6.0	15 37.9	17 51.4	-4 30.7	+1.1195	0.5555	0.1002	+90	+44
X Can. (var.)	6.2	+0.20	-6.3	+17 31.2	19 51.6	-2 34.4	-1.1188	0.5555	-0.1032	-35	-73

NEW MOON.

ELEMENTS OF OCCULTATIONS, 1924. 501

SEPTEMBER.

THE STAR'S					AT CONJUNCTION IN R.A.					Limiting Parallels.	
Name.	Mag.	Reductions from 1924.0		Apparent Declina- tion.	Greenwich Mean Time.	Hour Angle, H	P	s'	y'	N.	S.
		$\Delta\alpha$	$\Delta\delta$								
γ Vir. (<i>mean</i> .)	2.9	+0.35	-0.7	-1 2.0	1 55.3	+4 0.0	+1.0901	0.5552	-0.1966	+89	+29
65 Virginis	6.0	0.55	+0.1	4 31.6	2 1 7.6	-1 26.2	+0.9191	0.5587	0.1942	+86	+17
66 Virginis	5.7	0.56	0.0	4 46.0	1 41.2	-0 53.6	+1.0566	0.5588	0.1941	+86	+27
80 Virginis	5.6	0.60	0.5	5 0.6	6 42.3	+3 57.2	+0.3348	0.5600	0.1923	+55	-18
566 B. Virginis	6.4	0.63	0.7	5 7.0	10 31.3	+7 38.4	-0.2864	0.5610	0.1906	+20	-53
88 Virginis	6.5	+0.66	+0.6	-6 27.5	12 30.5	+9 33.7	+0.7106	0.5616	-0.1897	+84	+3
235 G. Virginis	6.5	0.80	1.4	7 11.2	3 1 51.4	-1 32.9	-1.0240	0.5656	0.1812	-26	-90
13 Libræ	5.7	1.02	1.8	11 35.3	17 53.8	-10 4.2	+0.6692	0.5713	0.1666	+76	+1
ξ^a Libræ	5.6	1.02	2.1	11 6.2	18 56.4	-9 3.8	+0.0019	0.5717	0.1655	+32	-36
17 Libræ	6.4	1.03	2.2	10 51.0	19 34.7	-8 26.8	-0.3613	0.5719	0.1648	+12	-58
18 Libræ	5.9	+1.02	+2.2	-10 50.3	19 52.4	-8 9.7	-0.4210	0.5720	-0.1644	+9	-62
130 B. Libræ	5.9	1.17	2.9	12 5.9	6 39.5	+2 14.2	-0.8453	0.5763	0.1515	-17	-90
γ Libræ	4.0	1.26	2.7	14 32.2	11 36.8	+7 0.7	+0.8960	0.5783	0.1449	+76	+16
190 B. Libræ	6.5	1.30	2.8	14 48.0	14 58.0	+10 14.6	+0.6854	0.5796	0.1401	+75	+3
η Libræ	5.5	1.31	2.7	15 25.9	15 14.4	+10 30.4	+1.2876	0.5797	0.1397	+75	+57
195 B. Libræ	6.2	+1.33	+3.6	-13 54.2	18 27.4	-10 23.7	-0.7037	0.5810	-0.1350	-11	-90
202 B. Libræ	6.4	1.36	3.7	14 10.6	20 23.4	-8 32.0	-0.6858	0.5817	0.1321	-10	-90
203 B. Libræ	6.2	1.37	3.6	14 36.4	20 31.0	-8 24.6	-0.2659	0.5818	0.1318	+14	-52
48 Libræ	4.6	1.37	3.8	14 3.6	21 12.8	-7 44.4	-0.9115	0.5820	0.1308	-24	-90
49 Libræ	5.4	1.38	2.9	16 18.6	22 6.5	-6 52.7	+1.2529	0.5824	0.1294	+74	+51
91 B. Scorpïi	6.1	+1.47	+4.5	-14 39.5	5 4 35.8	-0 37.7	-1.2266	0.5850	-0.1189	-54	-90
ϕ Ophiuchi	4.4	1.57	4.6	16 26.8	10 54.7	+5 27.0	-0.1319	0.5873	0.1081	+18	-44
24 Scorpïi	5.0	1.64	4.7	17 35.7	15 11.6	+9 34.2	+0.5842	0.5888	0.1004	+63	-3
78 B. Ophiuchi	6.5	1.71	5.8	16 41.1	21 7.2	-8 43.7	-0.8997	0.5908	0.0894	-27	-90
90 B. Ophiuchi	6.5	1.74	5.3	18 7.8	22 36.9	-7 17.4	+0.4312	0.5913	0.0805	+49	-12
29 Ophiuchi	6.4	+1.76	+5.3	-18 46.4	23 28.2	-6 28.0	+1.0091	0.5916	-0.0849	+72	+26
125 B. Ophiuchi	6.2	1.78	6.0	17 30.5	6 2 5.0	-3 57.4	-0.4866	0.5923	0.0798	-3	-68
164 B. Ophiuchi	6.0	1.84	6.6	17 40.6	6 47.9	+0 34.7	-0.6706	0.5936	0.0704	-15	-89
192 B. Ophiuchi	6.3	1.88	6.6	18 22.5	8 41.9	+2 24.3	-0.0944	0.5941	0.0666	+16	-41
305 B. Ophiuchi	6.3	2.03	8.0	18 47.3	21 16.2	-9 30.6	-0.3500	0.5967	0.0404	0	-58
16 G. Sagittarii	6.4	+2.07	+7.6	-20 20.0	22 53.1	-7 57.4	+1.1506	0.5970	-0.0369	+70	+40
39 G. Sagittarii	6.3	2.11	8.3	19 51.3	7 3 23.1	-3 38.0	+0.5238	0.5976	0.0272	+51	-6
16 Sagittarii	5.9	2.14	8.4	20 24.6	4 57.9	-2 6.9	+1.0437	0.5977	0.0238	+70	+30
64 B. Sagittarii	6.1	2.12	9.0	18 41.0	5 6.3	-1 58.9	-0.7056	0.5978	0.0235	-22	-90
52 G. Sagittarii	6.4	2.13	9.1	18 29.4	5 53.5	-1 13.5	-0.9198	0.5978	0.0218	-36	-90
17 H ¹ . Sagittarii	6.4	+2.13	+9.1	-18 38.8	6 23.2	-0 45.1	-0.7705	0.5979	-0.0207	-26	-90
Υ Sagit. (<i>var.</i>)	5.4	2.15	9.2	18 53.5	7 26.7	+0 16.1	-0.5434	0.5979	0.0184	-12	-74
21 Sagittarii	5.0	2.19	8.8	20 34.9	9 0.3	+1 46.0	+1.1389	0.5981	0.0150	+70	+39
95 B. Sagittarii	5.7	2.19	9.6	18 46.5	10 57.8	+3 38.8	-0.7133	0.5982	0.0108	-23	-90
100 B. Sagittarii	5.0	2.18	9.8	18 27.2	11 27.7	+4 7.7	-1.0442	0.5982	-0.0097	-46	-90
29 Sagittarii	5.3	+2.29	+10.1	-20 24.6	18 42.5	+11 5.5	+0.9230	0.5982	+0.0062	+70	+20
171 B. Sagittarii	6.1	2.33	11.0	19 21.2	8 0 4.1	-7 45.4	-0.0810	0.5980	0.0179	+13	-41
173 B. Sagittarii	6.4	2.33	11.0	19 12.6	0 5.5	-7 44.1	-0.2256	0.5980	0.0179	+5	-50
187 B. Sagittarii	6.4	2.34	11.3	18 51.2	1 42.3	-6 11.0	-0.5557	0.5978	0.0214	-13	-75
190 B. Sagittarii	5.4	2.35	11.2	19 24.4	2 9.2	-5 45.2	+0.0152	0.5978	0.0224	+18	-35
195 B. Sagittarii	6.3	+2.36	+11.1	-19 55.3	2 45.3	-5 10.5	+0.5495	0.5977	+0.0237	+53	-4
d Sagittarii	5.0	2.38	11.8	19 5.2	5 54.1	-2 9.0	-0.2111	0.5974	0.0305	+7	-49
226 B. Sagittarii	6.4	2.40	11.9	19 22.5	7 29.6	+0 37.3	-0.1321	0.5971	0.0339	+26	-28
ρ Sagittarii	4.0	2.38	12.3	17 59.3	7 32.0	-0 35.0	-1.2710	0.5971	0.0340	-70	-77
45 Sagittarii	6.0	2.39	12.1	18 26.8	7 35.6	-0 31.6	-0.8042	0.5971	0.0341	-27	-90
266 B. Sagittarii	6.1	+2.44	+12.6	-19 1.1	13 26.9	+5 6.2	+0.0113	0.5961	+0.0466	+20	-35

502 ELEMENTS OF OCCULTATIONS, 1924.

SEPTEMBER.

THE STAR'S					AT CONJUNCTION IN R.A.					Limiting Parallels.	
Name.	Mag.	Reductions from 1924.0		Apparent Declina- tion.	Greenwich Mean Time.	Hour Angle, H	γ	γ'	γ''	N	S.
		$\Delta\alpha$	$\Delta\delta$		d h m	h m					
267 B. Sagittarii	5.8	+2.44	+12.8	-18 23.8	8 13 42.4	+ 5 21.1	-0.6062	0.5960	+0.0472	-13	-81
f Sagittarii	5.1	2.48	12.7	19 56.5	17 26.7	+ 8 56.7	+1.1508	0.5953	0.0549	+71	+40
57 Sagittarii	6.0	2.50	13.2	19 14.1	19 48.5	+11 13.1	+0.5705	0.5947	0.0598	+58	- 3
π Capricorni	5.2	2.59	14.8	18 27.5	9 10 8.1	+ 0 59.8	+0.8448	0.5904	0.0882	+72	+14
ρ Capricorni	5.0	2.59	15.0	18 3.7	10 46.4	+ 1 36.6	+0.4989	0.5902	0.0894	+55	- 8
47 B. Capricorni	6.2	+2.59	+15.5	-16 47.0	13 32.2	+ 4 16.1	-0.5477	0.5892	+0.0945	- 6	-74
v Capricorni	5.3	2.61	15.2	18 24.2	15 23.3	+ 6 3.0	+1.2791	0.5884	0.0979	+72	+61
61 B. Capricorni	5.9	2.59	15.8	16 23.5	15 37.0	+ 6 16.3	-0.7472	0.5883	0.0983	-17	-90
94 B. Capricorni	5.7	2.64	16.3	16 19.2	22 44.6	-10 52.1	-0.0739	0.5855	0.1109	+22	-40
29 Capricorni	5.5	2.66	16.9	15 29.0	10 621.5	- 3 32.1	-0.0351	0.5821	0.1235	+25	-38
42 Capricorni	5.1	+2.68	+17.5	-14 22.9	17 24.0	+ 7 6.4	+0.2945	0.5769	+0.1399	+46	-20
44 Capricorni	6.0	2.69	17.7	14 44.6	18 3.1	+ 7 44.1	+0.7558	0.5767	0.1408	+76	+ 7
45 Capricorni	5.8	2.70	17.6	15 5.6	18 27.4	+ 8 7.5	+1.1727	0.5765	0.1414	+76	+39
151 B. Capricorni	6.1	2.69	18.1	13 4.4	20 55.5	+10 30.3	-0.5466	0.5753	0.1447	0	-73
μ Capricorni	5.2	2.71	18.0	13 54.3	22 28.6	-11 59.9	+0.5342	0.5745	0.1468	+63	- 6
e Aquarii	5.4	+2.71	+18.5	-11 56.0	11 6 5.6	- 4 39.1	-0.3374	0.5707	+0.1561	+12	-57
σ Aquarii	4.9	2.72	18.7	11 3.7	15 0.1	+ 3 56.8	+0.1983	0.5663	0.1657	+43	-25
58 Aquarii	6.4	2.72	18.7	11 17.4	15 27.9	+ 4 23.6	+0.5107	0.5661	0.1662	+64	- 8
213 B. Aquarii	6.5	2.72	19.0	8 42.2	20 36.0	+ 9 21.2	-1.2907	0.5636	0.1710	-57	-86
λ Aquarii	3.8	2.73	19.0	7 58.7	12 0 56.6	-10 27.0	-1.2988	0.5615	0.1746	-58	-86
81 Aquarii	6.4	+2.73	+19.0	- 7 27.9	4 57.7	- 6 34.1	-1.1267	0.5596	+0.1777	-34	-90
h Aquarii	5.4	2.73	19.0	8 5.9	6 41.1	- 4 54.1	-0.1608	0.5588	0.1789	+25	-45
ϕ Aquarii	4.4	2.73	18.8	6 27.2	10 55.4	- 0 48.3	-1.1075	0.5569	0.1817	-33	-90
χ Aquarii	5.3	2.72	18.8	8 8.2	12 5.6	+ 0 19.5	+0.8559	0.5564	0.1824	+62	+13
317 B. Aquarii	6.3	2.72	18.8	6 19.1	13 53.0	+ 2 3.4	-0.7094	0.5556	0.1835	- 5	-90
24 Piscium	6.1	+2.73	+18.2	- 3 34.4	13 5 3.9	- 7 15.6	-0.7440	0.5493	+0.1899	- 6	-90
27 Piscium	5.1	2.72	18.1	3 58.4	7 48.7	- 4 36.0	+0.1979	0.5483	0.1907	+47	-25
29 Piscium	5.1	2.72	18.1	3 26.7	9 19.0	- 3 8.7	-0.0683	0.5477	0.1910	+31	-40
4 Ceti	6.3	2.72	17.9	2 58.0	12 9.1	- 0 24.0	-0.0294	0.5466	0.1915	+33	-38
5 Ceti	6.3	2.72	17.9	2 51.9	12 22.6	- 0 11.0	-0.0929	0.5466	0.1916	+30	-41
54 B. Ceti	6.3	+2.70	+17.4	- 2 38.1	20 14.9	+ 7 26.3	+1.1778	0.5439	+0.1924	+88	+37
10 Ceti	6.4	2.72	17.2	0 27.9	21 10.5	+ 8 26.0	-0.9155	0.5436	0.1924	-17	-90
14 Ceti	5.4	2.70	16.9	- 0 55.1	14 1 37.0	-11 21.7	+0.3983	0.5423	0.1924	+61	-14
26 Ceti	6.0	2.67	15.7	+ 0 57.9	15 29.9	+ 2 5.2	+1.0626	0.5387	0.1902	+90	+28
33 Ceti	6.1	2.67	15.3	2 2.8	18 50.0	+ 5 19.1	+0.5435	0.5379	0.1893	+72	- 5
f Piscium	5.3	+2.66	+14.8	+ 3 13.1	22 25.2	+ 8 47.7	-0.0319	0.5372	+0.1881	+34	-37
117 G. Piscium	6.5	2.65	14.4	3 8.7	15 2 56.3	-10 49.5	+0.8930	0.5364	0.1863	+90	+15
v Piscium	4.7	2.64	13.4	5 6.4	10 10.8	- 3 48.3	+0.1273	0.5353	0.1829	+43	-28
39 B. Arietis	6.5	2.61	11.7	7 22.5	21 52.9	+ 7 32.3	-0.2142	0.5340	0.1760	+24	-46
64 Ceti	5.8	2.60	11.1	8 13.1	18 1 8.5	+10 41.9	-0.5560	0.5338	0.1737	+ 5	-70
ξ^1 Ceti	4.5	+2.60	+11.1	+ 8 29.6	1 57.7	+11 29.6	-0.7126	0.5337	+0.1731	- 4	-82
25 Arietis	6.5	2.57	9.8	9 51.9	9 10.9	- 5 30.4	-0.9695	0.5334	0.1677	-21	-81
ξ^2 Ceti	4.3	2.56	10.3	8 7.4	9 34.1	- 5 7.9	+0.9853	0.5334	0.1674	+90	+23
389 B. Ceti	6.3	2.57	10.0	9 13.8	10 16.7	- 4 26.6	-0.0974	0.5334	0.1668	+30	-38
85 Ceti	6.3	2.54	8.9	10 25.3	16 44.3	+ 1 49.2	-0.3329	0.5333	0.1613	+18	-53
μ Ceti	4.4	+2.54	+ 8.9	+ 9 47.8	17 57.9	+ 3 0.6	+0.5442	0.5333	+0.1602	+72	- 3
147 B. Arietis	5.8	2.50	6.8	12 53.8	17 4 41.9	-10 35.0	-1.1734	0.5335	0.1500	-38	-78
8 B. Tauri	6.2	2.42	5.9	12 21.8	13 35.4	- 1 57.8	+0.7028	0.5341	0.1406	+90	+ 8
f Tauri	4.3	2.40	5.4	12 40.7	16 56.0	+ 1 16.7	+0.8207	0.5343	0.1368	+90	+17
179 B. Tauri	5.9	2.29	2.5	14 57.7	18 11 11.5	- 5 1.6	+0.6149	0.5363	0.1147	+80	+ 6
48 Tauri	6.3	+2.25	+ 1.9	+15 12.7	15 10.5	- 1 10.0	+0.7849	0.5368	+0.1095	+90	+17

ELEMENTS OF OCCULTATIONS, 1924. 503

SEPTEMBER.

THE STAR'S					AT CONJUNCTION IN R.A.					Limiting Parallels.	
Name.	Mag.	Reductions from 1924.0		Apparent Declination.	Greenwich Mean Time.	Hour Angle, H	Y	x'	y'	N.	S.
		$\Delta\alpha$	$\Delta\delta$								
γ Tauri	3.9	+2.24	+1.6	+15 26.7	18 17 9.3	+ 0 45.1	+0.7418	0.5371	+0.1068	+90	+15
δ Tauri	3.9	2.26	0.8	17 21.9	18 40.6	+ 2 13.6	-1.2159	0.5373	0.1048	-46	-73
63 Tauri	5.7	2.24	1.0	16 36.1	18 55.5	+ 2 28.0	-0.3465	0.5373	0.1044	+16	-47
64 Tauri	4.9	2.25	0.7	17 16.2	19 15.0	+ 2 46.9	-1.0499	0.5374	0.1040	-29	-73
70 Tauri	6.4	2.21	1.1	15 46.1	20 1.3	+ 3 31.8	+0.6862	0.5375	0.1029	+90	+12
71 Tauri	4.6	+2.20	+1.2	+15 26.8	20 22.9	+ 3 52.7	+1.0781	0.5376	+0.1025	+90	+38
75 Tauri	5.2	2.20	0.9	16 11.5	21 24.3	+ 4 52.2	+0.3612	0.5377	0.1011	+59	-7
θ^1 Tauri	4.2	2.20	1.0	15 47.7	21 28.4	+ 4 56.1	+0.8054	0.5377	0.1010	+90	+19
θ^2 Tauri	3.6	2.20	1.0	15 42.2	21 31.1	+ 4 58.7	+0.9105	0.5377	0.1009	+90	+26
80 Tauri	5.8	2.18	1.0	15 28.4	22 14.9	+ 5 41.3	+1.2380	0.5378	0.0999	+90	+56
264 B. Tauri	4.8	+2.20	+0.8	+16 1.8	22 26.8	+ 5 52.8	+0.6436	0.5379	+0.0996	+84	+10
81 Tauri	5.5	2.18	1.0	15 31.7	22 29.8	+ 5 55.7	+1.2030	0.5378	0.0995	+90	+52
85 Tauri	6.0	2.18	0.8	15 41.4	23 5.5	+ 6 30.2	+1.0830	0.5380	0.0987	+90	+40
119 H ¹ . Tauri	6.2	2.21	0.0	17 51.4	23 53.5	+ 7 16.7	-1.2318	0.5381	0.0976	-49	-73
275 B. Tauri	6.5	2.18	0.6	16 9.9	23 57.5	+ 7 20.6	+0.6436	0.5381	0.0975	+84	+10
α Tauri (Alde.)	1.1	+2.17	+0.2	+16 21.5	19 1 4.5	+ 8 25.5	+0.5388	0.5382	+0.0959	+73	+4
89 Tauri	5.8	2.15	+0.4	15 52.9	2 10.7	+ 9 29.7	+1.1691	0.5384	0.0944	+90	+48
318 B. Tauri	5.7	2.07	-1.1	17 2.1	11 33.6	- 5 25.2	+0.7181	0.5399	0.0809	+90	+16
<i>m</i> Tauri	5.0	2.06	2.1	18 32.6	16 25.1	- 0 42.8	-0.5747	0.5407	0.0736	+3	-60
115 Tauri	5.3	1.92	2.9	17 53.8	20 2 0.4	+ 8 34.3	+0.7761	0.5422	0.0589	+90	+22
119 Tauri	4.9	+1.90	-3.4	+18 32.3	4 26.0	+10 55.3	+0.2057	0.5426	+0.0551	+48	-10
120 Tauri	5.6	1.90	3.4	18 29.2	5 4.1	+11 32.2	+0.2975	0.5427	0.0541	+54	-5
B. D. +19° 1110	6.0	1.80	4.8	19 50.9	14 7.3	- 3 41.9	-0.7837	0.5442	0.0396	-10	-71
χ^1 Orionis	4.5	1.79	5.1	20 15.7	15 4.7	- 2 46.3	-1.2041	0.5443	0.0381	-47	-70
57 Orionis	5.8	1.79	4.9	19 44.1	15 20.9	- 2 30.7	-0.6109	0.5444	0.0376	+1	-60
64 Orionis	5.1	+1.74	-5.3	+19 41.5	19 25.5	+ 1 26.1	-0.4232	0.5450	+0.0310	+12	-44
γ^2 Orionis	4.7	1.74	5.4	20 8.4	19 38.4	+ 1 38.6	-0.9121	0.5450	0.0306	-19	-70
68 Orionis	5.7	1.69	5.6	19 48.4	23 31.1	+ 5 23.9	-0.4377	0.5456	0.0242	+11	-45
19 B. Geminorum	6.2	1.67	5.3	18 42.0	21 0 16.0	+ 6 7.2	+0.8032	0.5457	0.0230	+90	+28
71 Orionis	5.1	1.66	5.7	19 10.9	0 52.8	+ 6 42.8	+0.2846	0.5458	0.0220	+53	-2
16 Geminorum	6.2	+1.60	-6.5	+20 32.5	7 5.7	-11 16.3	-1.1112	0.5467	+0.0116	-36	-70
ν Geminorum	4.1	1.59	6.5	20 15.6	7 35.0	-10 48.0	-0.7952	0.5468	+0.0108	-11	-70
<i>f</i> Geminorum	5.3	1.16	7.6	17 50.8	22 16 56.3	- 2 31.7	+1.2722	0.5505	-0.0457	+78	+69
<i>g</i> Geminorum	5.0	1.12	8.1	18 41.7	20 3.3	+ 0 29.2	+0.1942	0.5507	0.0509	+48	-10
209 B. Geminorum	6.2	1.09	8.4	19 31.1	22 46.6	+ 3 7.1	-0.8505	0.5510	0.0555	-14	-71
3 Cancri	5.7	+1.04	-7.9	+17 31.0	23 2 57.2	+ 7 9.4	+1.0878	0.5512	-0.0624	+90	+45
10 H. Cancri	6.1	1.02	8.4	19 3.3	4 47.7	+ 8 56.3	-0.7076	0.5513	0.0655	-5	-71
ζ Can. (mean)	4.7	0.98	8.2	17 52.6	8 18.2	-11 40.1	-0.3364	0.5515	0.0713	+57	-4
d^1 Cancri	5.9	0.91	8.5	18 34.5	13 31.7	- 6 36.9	-0.8171	0.5518	0.0798	-12	-72
d^2 Cancri	6.2	0.89	8.2	17 17.7	14 42.4	- 5 28.5	+0.4761	0.5519	0.0817	+68	+3
θ Cancri	5.5	+0.87	-8.5	+18 21.0	17 23.4	- 2 52.8	-0.8915	0.5520	-0.0860	-17	-72
54 Cancri	6.3	0.77	7.6	15 37.9	24 2 31.5	+ 5 57.3	+1.1956	0.5523	0.1003	+90	+52
<i>X</i> Cancri (var.)	6.2	0.75	8.2	17 31.2	4 32.4	+ 7 54.2	-1.0458	0.5524	0.1034	-28	-73
ϕ^1 Cancri	5.1	0.75	7.7	15 36.8	5 26.0	+ 8 46.1	+0.9157	0.5524	0.1048	+90	+26
ϕ^2 Cancri	5.7	0.74	7.8	15 52.3	5 35.3	+ 8 55.0	+0.6204	0.5524	0.1050	+81	+8
81 Cancri	6.4	+0.65	-7.4	+15 18.1	12 30.2	- 8 23.6	+0.4702	0.5527	-0.1154	+67	-2
π Cancri	5.6	0.66	7.6	15 15.3	13 51.6	- 7 4.8	+0.3609	0.5527	0.1173	+58	-8
VENUS	-3.8	..	..	14 54.5	15 23.1	- 5 36.5	+0.5548	0.5080	0.1095	+74	+3
227 B. Cancri	6.4	0.64	7.6	15 41.6	16 40.7	- 4 21.5	-0.4439	0.5527	0.1214	+11	-54
7 Leonis	6.2	0.58	7.3	14 43.0	23 32.1	+ 2 16.5	-0.2656	0.5529	0.1311	+21	-44
11 Leonis	6.5	+0.56	-7.3	+14 41.4	25 0 32.3	+ 3 14.6	-0.3677	0.5529	-0.1324	+15	-50

504 ELEMENTS OF OCCULTATIONS, 1924.

SEPTEMBER.

THE STAR'S					AT CONJUNCTION IN R.A.						Limiting Parallels.	
Name.	Mag.	Reductions from 1924.0		Apparent Declina- tion.	Greenwich Mean Time.	Hour Angle, <i>H</i>	<i>Y</i>	<i>z'</i>	<i>y'</i>	N.	S.	
		$\Delta\alpha$	$\Delta\delta$									
		<i>s</i>	<i>"</i>	<i>° ' "</i>	<i>d h m</i>	<i>h m</i>				<i>°</i>	<i>' "</i>	
NEPTUNE	7.8	..	..	+ 14 34.4	25 1 41.5	+ 4 21.5	-0.3966	0.5518	-0.1336	+14	-53
<i>ψ</i> Leonis	5.6	+0.55	- 7.1	14 22.1	3 12.6	+ 5 49.6	-0.3831	0.5530	0.1360	+15	-52	
<i>ν</i> Leonis	5.0	0.50	6.6	12 48.4	10 0.5	-11 35.9	+0.3239	0.5532	0.1449	+56	-13	
<i>α</i> Leon. (<i>Reg.</i>)	1.3	0.45	6.3	12 20.2	14 46.2	- 6 59.5	+0.1161	0.5533	0.1508	+43	-24	
45 Leonis	5.8	0.42	5.6	10 8.9	23 47.6	+ 1 44.0	+1.0181	0.5537	0.1612	+90	+28	
<i>ρ</i> Leonis	3.8	+0.40	- 5.4	+ 9 41.8	26 2 12.6	+ 4 4.2	+1.1004	0.5538	-0.1638	+90	+35	
NEW MOON.												
235 G. Virginis	6.5	+0.55	+ 1.8	- 7 11.2	30 8 49.4	+ 7 12.6	-1.1104	0.5735	-0.1849	-33	-90	

OCTOBER.

13 Libræ	5.7	+0.69	+ 2.6	-11 35.3	1 0 27.9	- 1 42.5	+0.5478	0.5790	-0.1698	+66 -6
5 ^a Libræ	5.6	0.69	2.8	11 6.2	1 29.0	- 0 43.7	-0.1134	0.5794	0.1687	+25 -42
17 Libræ	6.4	0.69	2.9	10 51.0	2 6.4	- 0 7.6	-0.4733	0.5796	0.1680	+ 6 -66
18 Libræ	5.9	+0.69	+ 2.9	-10 50.3	2 23.7	+ 0 9.1	-0.5326	0.5797	-0.1677	+ 3 -71
130 B. Libræ	5.9	0.79	3.6	12 5.9	12 55.6	+10 17.8	-0.9624	0.5835	0.1543	-25 -90
γ Libræ	4.0	0.87	3.5	14 32.2	17 46.4	- 9 2.2	+0.7580	0.5852	0.1474	+76 + 7
190 B. Libræ	6.5	0.90	3.7	14 48.0	21 3.2	- 5 52.8	+0.5472	0.5863	0.1426	+64 - 5
η Libræ	5.5	0.90	3.6	15 25.9	21 19.2	- 5 37.3	+1.1438	0.5864	0.1422	+75 +36
195 B. Libræ	6.2	+0.92	+ 4.3	-13 54.2	2 0 28.3	- 2 35.3	-0.8319	0.5874	-0.1373	-18 -90
202 B. Libræ	6.4	0.94	4.4	14 10.6	2 21.9	- 0 46.0	-0.8155	0.5880	0.1343	-17 -90
203 B. Libræ	6.2	0.95	4.3	14 36.4	2 29.4	- 0 38.8	-0.3993	0.5881	0.1341	+ 7 -61
48 Libræ	4.6	0.95	4.5	14 3.6	3 10.4	+ 0 0.7	-1.0400	0.5883	0.1329	-33 -90
49 Libræ	5.4	0.95	3.7	16 18.6	4 3.0	+ 0 51.3	+1.1057	0.5886	0.1315	+74 +33
ϕ Ophiuchi	4.4	+1.11	+ 5.2	-16 26.8	16 37.6	-11 2.8	-0.2752	0.5923	-0.1096	+10 -53
24 Scorpii	5.0	1.17	5.3	17 35.7	20 50.6	- 6 59.5	+0.4344	0.5933	0.1017	+51 -11
78 B. Ophiuchi	6.5	1.23	6.2	16 41.1	2 41.4	- 1 22.3	-1.0435	0.5946	0.0904	-38 -90
90 B. Ophiuchi	6.5	1.25	5.7	18 7.8	4 10.0	+ 0 3.0	+0.2799	0.5949	0.0875	+39 -19
29 Ophiuchi	6.4	1.27	5.7	18 46.4	5 0.7	+ 0 51.7	+0.8546	0.5951	0.0858	+72 +14
125 B. Ophiuchi	6.2	+1.29	+ 6.3	-17 30.5	7 35.7	+ 3 20.6	-0.6347	0.5955	-0.0806	-12 -84
164 B. Ophiuchi	6.0	1.35	6.8	17 40.6	12 15.8	+ 7 49.9	-0.8198	0.5963	0.0710	-24 -90
192 B. Ophiuchi	6.3	1.38	6.8	18 22.5	14 8.8	+ 9 38.5	-0.2463	0.5965	0.0671	+ 8 -51
305 B. Ophiuchi	6.3	1.53	7.9	18 47.3	4 2 38.6	- 2 21.0	-0.5038	0.5975	0.0405	- 8 -70
16 G. Sagittarii	6.4	1.56	7.5	20 20.0	4 15.1	- 0 48.1	+0.9948	0.5975	0.0370	+70 +25
39 G. Sagittarii	6.3	+1.61	+ 8.1	-19 51.4	8 44.5	+ 3 30.7	+0.3689	0.5975	-0.0272	+40 -15
15 Sagittarii	5.3	1.64	8.0	20 45.0	10 18.8	+ 5 1.4	+1.2329	0.5974	0.0238	+70 +53
16 Sagittarii	5.9	1.64	8.1	20 24.6	10 19.2	+ 5 1.8	+0.8888	0.5974	0.0238	+70 +17
64 B. Sagittarii	6.1	1.62	8.7	18 41.0	10 27.6	+ 5 9.8	-0.8601	0.5974	0.0235	-32 -90
52 G. Sagittarii	6.4	1.62	8.8	18 29.4	11 14.8	+ 5 55.2	-1.0743	0.5974	0.0218	-47 -90
17 H ¹ Sagittarii	6.4	+1.63	+ 8.8	-18 38.9	11 44.4	+ 6 23.6	-0.9251	0.5974	-0.0207	-36 -90
γ Sagit. (var.)	5.4	1.65	8.9	18 53.6	12 48.0	+ 7 24.8	-0.6980	0.5973	0.0184	-21 -90
21 Sagittarii	5.0	1.68	8.4	20 34.9	14 21.7	+ 8 54.8	+0.9849	0.5972	0.0149	+70 +25
95 B. Sagittarii	5.7	1.69	9.2	18 46.5	16 19.2	+10 47.7	-0.8682	0.5970	0.0106	-33 -90
100 B. Sagittarii	5.0	1.69	9.4	18 27.2	16 49.3	+11 16.7	-1.1995	0.5970	-0.0095	-61 -90
29 Sagittarii	5.3	+1.80	+ 9.4	-20 24.6	5 0 5.4	- 5 44.3	+0.7714	0.5960	+0.0064	+70 + 9
36 Sagittarii	5.1	1.83	9.6	20 45.3	3 9.9	- 2 47.0	+1.1515	0.5955	0.0131	+70 +40
171 B. Sagittarii	6.1	1.85	10.3	19 21.2	5 29.0	- 0 33.2	-0.2336	0.5951	0.0181	+ 4 -50
173 B. Sagittarii	6.4	1.85	10.4	19 12.7	5 30.4	- 0 31.9	-0.3786	0.5951	0.0181	- 3 -60
187 B. Sagittarii	6.4	1.86	10.6	18 51.2	7 7.8	+ 1 1.8	-0.7093	0.5948	0.0217	-22 -90
190 B. Sagittarii	5.4	+1.87	+10.5	-19 24.5	7 34.9	+ 1 27.8	-0.1366	0.5947	+0.0226	+10 -44

ELEMENTS OF OCCULTATIONS, 1924. 505

OCTOBER.

THE STAR'S					AT CONJUNCTION IN R.A.					Limiting Parallels.	
Name.	Mag.	Reductions from 1924.0		Apparent Declina- tion.	Greenwich Mean Time.	Hour Angle, H	Y	z'	y'	N.	S.
		$\Delta\alpha$	$\Delta\delta$								
195 B. Sagittarii	6.3	+1.88	+10.3	-19 55.3	5 8 11.3	+ 2 2.7	+0.3996	0.5946	+0.0239	+42	-13
d Sagittarii	5.0	1.91	10.9	19 5.2	11 21.6	+ 5 5.8	-0.3626	0.5938	0.0307	- 2	-59
226 B. Sagittarii	6.4	1.93	11.0	19 22.5	12 58.0	+ 6 38.4	-0.0176	0.5934	0.0341	+17	-37
45 Sagittarii	6.0	1.93	11.3	18 26.8	13 4.1	+ 6 44.3	-0.9576	0.5933	0.0343	-37	-90
266 B. Sagittarii	6.1	1.99	11.6	19 1.1	18 59.0	-11 34.4	-0.1366	0.5917	0.0468	+13	-44
267 B. Sagittarii	5.8	+1.99	+11.9	-18 23.9	19 14.7	-11 19.3	-0.7570	0.5916	+0.0473	-22	-90
f Sagittarii	5.1	2.04	11.6	19 56.5	23 1.7	- 7 41.0	+1.0107	0.5904	0.0551	+71	+27
57 Sagittarii	6.0	2.06	12.0	19 14.1	8 1 25.4	- 5 22.7	+0.4286	0.5896	0.0599	+47	-12
π Capricorni	5.2	2.20	13.4	18 27.5	15 58.2	+ 8 37.3	+0.7145	0.5841	0.0880	+72	+ 5
q Capricorni	5.0	2.20	13.6	18 3.7	16 37.2	+ 9 14.8	+0.3664	0.5838	0.0892	+46	-15
o Capricorni	5.6	+2.22	+13.3	-18 49.9	17 2.7	+ 9 39.4	+1.1936	0.5836	+0.0900	+72	+44
47 B. Capricorni	6.2	2.22	14.2	16 47.0	19 25.9	+11 57.3	-0.6858	0.5826	0.0943	-14	-90
v Capricorni	5.3	2.25	13.8	18 24.2	21 19.1	-10 13.7	+1.1563	0.5818	0.0977	+72	+39
61 B. Capricorni	5.9	2.23	14.6	16 23.5	21 33.0	-10 0.3	-0.8854	0.5817	0.0981	-25	-90
94 B. Capricorni	5.7	2.30	15.0	16 19.2	7 4 48.9	- 3 0.4	-0.2011	0.5784	0.1105	+15	-48
29 Capricorni	5.5	+2.36	+15.6	-15 29.0	12 35.1	+ 4 29.0	-0.1549	0.5749	+0.1229	+19	-45
42 Capricorni	5.1	2.44	16.2	14 23.0	23 51.8	- 8 38.4	+0.1894	0.5695	0.1393	+40	-25
44 Capricorni	6.0	2.45	16.4	14 44.6	8 0 31.8	- 7 59.7	+0.6556	0.5691	0.1403	+73	+ 1
45 Capricorni	5.8	2.45	16.2	15 5.6	0 56.7	- 7 35.6	+1.0768	0.5689	0.1408	+75	+30
151 B. Capricorni	6.1	2.47	16.9	13 4.4	3 28.1	- 5 9.5	-0.6556	0.5678	0.1441	- 7	-85
μ Capricorni	5.2	+2.50	+16.7	-13 54.3	5 3.3	- 3 37.7	+0.4372	0.5670	+0.1461	+56	-12
e Aquarii	5.4	2.53	17.4	11 56.1	12 50.5	+ 3 53.4	-0.4330	0.5633	0.1554	+ 7	-63
σ Aquarii	4.9	2.58	17.7	11 3.7	21 56.8	-11 18.9	+0.1197	0.5592	0.1650	+38	-29
58 Aquarii	6.4	2.59	17.7	11 17.4	22 25.2	-10 51.4	+0.4357	0.5589	0.1655	+58	-12
81 Aquarii	6.4	2.67	18.5	7 27.9	9 12 12.3	+ 2 28.1	-1.1964	0.5531	0.1772	-41	-90
h Aquarii	5.4	+2.68	+18.3	- 8 5.9	13 57.9	+ 4 10.3	-0.2192	0.5524	+0.1784	+22	-49
φ Aquarii	4.4	2.70	18.4	6 27.2	18 17.3	+ 8 21.2	-1.1672	0.5507	0.1813	-38	-90
χ Aquarii	5.3	2.70	18.2	8 8.2	19 28.8	+ 9 30.3	+0.8148	0.5503	0.1821	+82	+10
317 B. Aquarii	6.3	2.71	18.4	6 19.1	21 18.3	+11 16.3	-0.7609	0.5496	0.1831	- 8	-90
24 Piscium	6.1	2.80	18.3	3 34.4	10 12 45.5	+ 2 13.7	-0.7692	0.5445	0.1900	- 8	-90
27 Piscium	5.1	+2.80	+18.1	- 3 58.4	15 32.9	+ 4 55.9	+0.1843	0.5436	+0.1908	+46	-26
29 Piscium	5.1	2.81	18.1	3 26.7	17 4.6	+ 6 24.6	-0.0811	0.5432	0.1912	+31	-41
4 Ceti	6.3	2.82	18.0	2 58.0	19 57.3	+ 9 11.9	-0.0370	0.5424	0.1918	+33	-38
5 Ceti	6.3	2.82	18.0	2 51.9	20 11.0	+ 9 25.1	-0.1005	0.5423	0.1919	+30	-42
54 B. Ceti	6.3	2.84	17.6	2 38.1	11 4 9.7	- 6 51.1	+1.1921	0.5404	0.1930	+88	+38
10 Ceti	6.4	+2.87	+17.7	- 0 27.9	5 12.1	- 5 50.6	-0.9120	0.5401	+0.1930	-15	-90
14 Ceti	5.4	2.88	17.4	- 0 55.1	9 35.7	- 1 35.2	+0.4174	0.5392	0.1931	+62	-13
26 Ceti	6.0	2.92	16.4	+ 0 57.9	23 36.6	+11 59.7	+1.1094	0.5368	0.1914	+90	+30
33 Ceti	6.1	2.94	16.2	2 2.8	12 2 58.3	- 8 44.8	+0.5939	0.5363	0.1905	+76	- 4
f Piscium	5.3	2.95	15.8	3 13.1	6 34.9	- 5 14.8	+0.0226	0.5359	0.1894	+37	-34
117 G. Piscium	6.5	+2.96	+15.4	+ 3 8.8	11 7.5	- 0 50.6	+0.9588	0.5355	+0.1878	+90	+20
v Piscium	4.7	2.98	14.6	5 6.5	18 23.8	+ 6 12.4	+0.2032	0.5349	0.1845	+48	-24
39 B. Arietis	6.5	3.02	13.2	7 22.5	13 6 7.3	- 6 25.5	-0.1189	0.5345	0.1778	+29	-41
64 Ceti	5.8	3.02	12.7	8 13.1	9 23.0	- 3 15.8	-0.4556	0.5345	0.1756	+11	-62
ξ^1 Ceti	4.5	3.03	12.7	8 29.7	10 12.2	- 2 28.0	-0.6111	0.5345	0.1751	+ 2	-75
25 Arietis	6.5	+3.03	+11.5	+ 9 51.9	17 25.1	+ 4 31.7	-0.8562	0.5346	+0.1696	-13	-81
ξ^2 Ceti	4.3	3.02	11.8	8 7.4	17 48.3	+ 4 54.1	+1.1014	0.5346	0.1693	+90	+32
389 B. Ceti	6.3	3.03	11.6	9 13.8	18 30.8	+ 5 35.3	+0.0187	0.5346	0.1689	+37	-33
85 Ceti	6.3	3.04	10.6	10 25.3	14 0 57.6	+11 50.4	-0.2068	0.5349	0.1634	+24	-45
μ Ceti	4.4	3.04	10.5	9 47.8	2 11.1	-10 58.4	+0.6729	0.5349	0.1623	+86	+ 4
147 B. Arietis	5.8	+3.05	+ 8.6	+12 53.8	12 52.9	- 0 36.3	-1.0294	0.5356	+0.1520	-25	-78

506 ELEMENTS OF OCCULTATIONS, 1924.

OCTOBER.

THE STAR'S					AT CONJUNCTION IN R.A.					Limiting Parallels.	
Name.	Mag.	Reductions from 1924.0		Apparent Declina- tion.	Greenwich Mean Time.	Hour Angle, H	Y	x'	y'	N.	S.
		$\Delta\alpha$	$\Delta\delta$								
8 B. Tauri	6.2	+3.01	+7.4	+12 21.8	14 21 44.0	+7 58.6	+0.8595	0.5364	+0.1426	+90	+18
f Tauri	4.3	3.01	6.9	12 40.8	15 1 3.6	+11 12.1	+0.9818	0.5367	0.1388	+90	+26
30 B. Tauri	6.4	3.04	6.0	15 11.0	4 27.8	-9 30.1	-1.3022	0.5370	0.1348	-62	-74
179 B. Tauri	5.9	2.96	3.8	14 57.7	19 13.5	+4 48.3	+0.7981	0.5386	0.1163	+90	+17
193 B. Tauri	6.2	2.99	3.0	17 5.0	21 34.1	+7 4.4	-1.2726	0.5389	0.1132	-56	-73
48 Tauri	6.3	+2.94	+3.2	+15 12.8	23 11.3	+8 38.6	+0.9726	0.5391	+0.1110	+90	+29
γ Tauri	3.9	2.94	2.8	15 26.8	16 1 9.6	+10 33.1	+0.9315	0.5393	0.1083	+90	+27
δ Tauri	3.9	2.96	2.2	17 22.0	2 40.3	-11 59.0	-1.0247	0.5395	0.1063	-26	-73
63 Tauri	5.7	2.95	2.3	16 36.1	2 55.2	-11 44.5	-0.1549	0.5395	0.1059	+27	-35
64 Tauri	4.9	2.96	2.1	17 16.2	3 14.6	-11 25.8	-0.8580	0.5396	0.1054	-14	-73
70 Tauri	6.4	+2.92	+2.3	+15 46.1	4 0.7	-10 41.0	+0.8790	0.5397	+0.1044	+90	+24
71 Tauri	4.6	2.91	2.4	15 26.9	4 22.2	-10 20.3	+1.2713	0.5397	0.1040	+85	+62
75 Tauri	5.2	2.92	2.1	16 11.5	5 23.3	-9 21.0	+0.5554	0.5398	0.1025	+74	+4
θ ¹ Tauri	4.2	2.91	2.1	15 47.7	5 27.4	-9 17.1	+0.9997	0.5398	0.1024	+90	+32
θ ² Tauri	3.6	2.91	2.1	15 42.3	5 30.0	-9 14.6	+1.1048	0.5398	0.1023	+90	+41
264 B. Tauri	4.8	+2.91	+1.9	+16 1.8	6 25.5	-8 20.8	+0.8388	0.5399	+0.1010	+90	+21
85 Tauri	6.0	2.90	1.9	15 41.4	7 4.0	-7 43.5	+1.2790	0.5400	0.1001	+81	+65
119 H ¹ Tauri	6.2	2.94	1.2	17 51.5	7 51.8	-6 57.2	-1.0356	0.5401	0.0990	-28	-73
275 B. Tauri	6.5	2.90	1.7	16 9.9	7 55.8	-6 53.3	+0.8402	0.5401	0.0989	+90	+22
α Tauri (Ald.)	1.1	2.90	1.3	16 21.5	9 2.5	-5 48.7	+0.7367	0.5402	0.0973	+90	+16
302 B. Tauri	6.1	+2.91	+0.1	+18 35.9	14 3.7	-0 57.0	-1.2694	0.5408	+0.0900	-58	-72
i Tauri	5.1	2.89	-0.3	18 42.7	16 32.4	+1 27.0	-1.1764	0.5411	0.0864	-42	-72
318 B. Tauri	5.7	2.82	0.3	17 2.1	19 29.1	+4 18.2	+0.9257	0.5415	0.0820	+90	+29
m Tauri	5.0	2.84	1.3	18 32.6	0 19.8	+8 59.7	-0.3641	0.5420	0.0746	+15	-45
353 B. Tauri	6.5	2.78	2.7	19 44.3	6 52.0	-8 40.6	-1.2318	0.5427	0.0645	-51	-71
115 Tauri	5.3	+2.71	-2.5	+17 53.9	9 54.0	-5 44.4	+0.9951	0.5430	+0.0597	+90	+37
119 Tauri	4.9	2.70	3.0	18 32.3	12 19.4	-3 23.6	+0.4255	0.5432	0.0558	+64	+2
120 Tauri	5.6	2.69	3.1	18 29.2	12 57.5	-2 46.7	+0.5179	0.5433	0.0548	+71	+7
B.D.+19° 1110	6.0	0.62	4.8	19 50.9	22 0.7	+5 59.2	-0.5604	0.5442	0.0402	+4	-55
χ ¹ Orionis	4.5	2.61	5.1	20 15.7	22 58.2	+6 54.9	-0.9814	0.5443	0.0386	-24	-70
57 Orionis	5.8	+2.61	-4.9	+19 44.1	23 14.4	+7 10.5	-0.3867	0.5443	+0.0382	+14	-43
64 Orionis	5.1	2.56	5.4	19 41.5	18 3 19.4	+11 7.7	-0.1968	0.5446	0.0314	+25	-29
γ ² Orionis	4.7	2.57	5.6	20 8.4	3 32.3	+11 20.3	-0.6869	0.5446	0.0311	-4	-66
68 Orionis	5.7	2.52	6.0	19 48.4	7 25.6	-8 54.0	-0.2097	0.5449	0.0246	+24	-30
19 B. Geminorum	6.2	2.49	5.7	18 42.0	8 10.6	-8 10.4	+1.0350	0.5450	0.0234	+90	+44
71 Orionis	5.1	+2.49	-6.1	+19 10.9	8 47.6	-7 34.6	+0.5151	0.5450	+0.0224	+71	+11
15 Geminorum	6.5	2.45	7.2	20 50.1	14 56.8	-1 37.2	-1.2098	0.5454	0.0120	-48	-70
16 Geminorum	6.2	2.44	7.1	20 32.5	15 1.8	-1 32.4	-0.8832	0.5454	0.0119	-17	-70
γ Geminorum	4.1	2.43	7.1	20 15.6	15 31.2	-1 4.0	-0.5659	0.5454	+0.0111	+3	-53
ζ Gem. (var.)	3.7	2.23	9.0	20 40.8	19 8 16.6	-8 50.9	-1.0802	0.5461	-0.0172	-33	-70
56 Geminorum	5.2	+2.11	-9.8	+20 35.1	16 46.3	-0 37.7	-1.1804	0.5464	-0.0315	-44	-70
61 Geminorum	5.8	2.08	10.0	20 24.5	19 8.8	+1 40.1	-1.0632	0.5464	0.0355	-31	-70
g Geminorum	5.0	1.94	10.1	18 41.6	4 18.1	+10 31.7	+0.4288	0.5465	0.0507	+64	+3
209 B. Geminorum	6.2	1.91	10.6	19 31.1	7 3.5	-10 48.2	-0.6227	0.5465	0.0553	0	-62
10 H. Cancri	6.1	1.83	10.8	19 3.3	13 9.4	-4 54.2	-0.4810	0.5465	0.0652	+9	-52
ζ Can. (mean)	4.7	+1.78	-10.6	+17 52.5	16 42.9	-1 27.6	+0.5681	0.5465	-0.0710	+76	+9
d ¹ Cancri	5.9	1.70	11.1	18 34.5	22 1.0	+3 40.3	-0.5952	0.5465	0.0795	+2	-62
d ² Cancri	6.2	1.67	10.8	17 17.7	23 12.7	+4 49.6	+0.7057	0.5465	0.0814	+90	+16
θ Cancri	5.5	1.65	11.2	18 20.9	21 1 56.2	+7 27.8	-0.6722	0.5465	0.0857	-2	-69
X Can. (var.)	6.2	1.50	11.3	17 31.1	13 16.0	-5 34.3	-0.8348	0.5464	0.1030	-13	-73
o ¹ Cancri	5.1	+1.48	-10.6	+15 36.7	14 10.4	-4 41.7	+1.1391	0.5464	-0.1044	+90	+44

ELEMENTS OF OCCULTATIONS, 1924. 507

OCTOBER.

THE STAR'S					AT CONJUNCTION IN R.A.					Limiting Parallels.	
Name.	Mag.	Reductions from 1924.0		Apparent Declination.	Greenwich Mean Time.	Hour Angle, H	Γ	α'	γ'	N.	S.
		$\Delta\alpha$	$\Delta\delta$		d h m	h m					
α^a Cancri	5.7	+1.48	-10.7	+15 52.3	21 14 19.9	- 4 32.5	+0.8417	0.5465	-0.1047	+90	+21
81 Cancri	6.4	1.36	10.5	15 18.0	21 21.8	+ 2 15.8	+0.6848	0.5465	0.1150	+90	+11
π Cancri	5.6	1.37	10.7	15 15.3	22 44.6	+ 3 35.8	+0.5736	0.5465	0.1169	+76	+ 4
227 B. Cancri	6.4	1.33	10.9	15 41.5	22 1 36.6	+ 6 22.3	-0.2391	0.5465	0.1210	+22	-41
7 Leonis	6.2	1.24	10.6	14 43.0	8 35.0	-10 52.8	-0.0666	0.5466	0.1306	+32	-32
11 Leonis	6.5	+1.23	-10.7	+14 41.3	9 36.2	- 9 53.5	-0.1704	0.5467	-0.1320	+26	-39
NEPTUNE	7.8	..	..	14 21.9	12 1.2	- 7 33.2	-0.1451	0.5460	0.1350	+28	-37
ψ Leonis	5.6	1.20	10.5	14 22.0	12 19.3	- 7 15.7	-0.1889	0.5467	0.1356	+25	-40
ν Leonis	5.0	1.12	10.0	12 48.3	19 13.9	- 0 34.5	+0.5142	0.5470	0.1445	+70	- 2
α Leon. (Reg.)	1.3	1.06	9.7	12 20.2	23 0 4.4	+ 4 6.6	+0.2989	0.5472	0.1504	+54	-14
45 Leonis	5.8	+0.98	- 8.9	+10 8.9	9 14.1	-11 1.6	+1.1924	0.5479	-0.1610	+90	+44
ρ Leonis	3.8	0.96	8.7	9 41.7	11 41.2	- 8 39.2	+1.2711	0.5482	0.1630	+90	+52
χ Leonis	4.7	0.80	7.6	7 44.7	24 2 56.4	+ 6 6.2	+0.7009	0.5500	0.1785	+90	+ 5
308 B. Leonis	5.8	0.78	7.7	8 28.5	7 10.1	-10 11.6	-0.8247	0.5507	0.1822	-11	-82
σ Leonis	4.1	0.76	6.9	6 26.7	10 31.1	-10 34.0	+0.6796	0.5513	0.1848	+86	+ 2
b Virginis	5.2	+0.64	- 5.3	+ 4 4.6	25 4 37.7	+ 6 56.8	-0.3275	0.5552	-0.1962	+18	-55
10 Virginis	6.2	0.64	- 4.8	+ 2 19.4	9 7.7	+11 17.8	+0.5893	0.5505	0.1983	+75	- 4
NEW MOON.											
φ Ophiuchi	4.4	+0.82	+ 5.4	-16 26.8	30 0 25.0	- 1 27.6	-0.4371	0.6024	-0.1132	+ 2	-64
24 ScorpII	5.0	+0.86	+ 5.6	-17 35.7	4 29.8	+ 2 27.3	+0.2551	0.6035	-0.1052	+40	-21
78 B. Ophiuchi	6.5	0.90	6.3	16 41.1	10 9.1	+ 7 53.2	-1.2097	0.6049	0.0930	-54	-90
90 B. Ophiuchi	6.5	0.92	6.0	18 7.8	11 34.9	+ 9 15.6	+0.0918	0.6051	0.0906	+29	-31
29 Ophiuchi	6.4	0.93	6.0	18 46.4	12 23.9	+10 2.6	+0.6569	0.6053	0.0888	+67	+ 2
125 B. Ophiuchi	6.2	0.94	6.5	17 30.5	14 54.0	-11 33.3	-0.8142	0.6057	0.0835	-23	-90
164 B. Ophiuchi	6.0	+0.98	+ 6.9	-17 40.6	19 25.0	- 7 13.2	-1.0031	0.6063	-0.0737	-37	-90
192 B. Ophiuchi	6.3	1.00	6.9	18 22.5	21 14.4	- 5 28.2	-0.4404	0.6065	0.0697	- 2	-65
305 B. Ophiuchi	6.3	1.11	7.8	18 47.3	31 9 20.9	+ 6 8.9	-0.7096	0.6068	0.0423	-20	-90
16 G. Sagittarii	6.4	1.14	7.5	20 20.0	10 54.6	+ 7 38.9	+0.7669	0.6067	0.0387	+70	+ 9
39 G. Sagittarii	6.3	1.17	8.0	19 51.4	15 16.1	+11 49.8	+0.1449	0.6063	0.0287	+26	-27
15 Sagittarii	5.3	+1.20	+ 7.9	-20 45.0	16 47.7	-10 42.2	+0.9963	0.6062	-0.0251	+70	+25
16 Sagittarii	5.9	1.20	8.0	20 24.6	16 48.0	-10 41.9	+0.6566	0.6062	0.0251	+63	+ 2
64 B. Sagittarii	6.1	1.18	8.5	18 41.0	16 56.2	-10 34.1	-1.0699	0.6062	0.0248	-47	-90
17 H ¹ Sagittarii	6.4	1.19	8.6	18 38.9	18 10.9	- 9 22.4	-1.1354	0.6060	0.0220	-53	-90
Υ Sagit. (var.)	5.4	1.20	8.6	18 53.6	19 12.6	- 8 23.1	-0.9123	0.6059	0.0195	-35	-90
21 Sagittarii	5.0	+1.24	+ 8.2	-20 34.9	20 43.7	- 6 55.7	+0.7480	0.6056	-0.0160	+70	+ 8
95 B. Sagittarii	5.7	+1.24	+ 8.9	-18 46.5	22 38.1	- 5 6.0	-1.0839	0.6053	-0.0116	-49	-90

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121 B. Sagittarii	5.9	+1.29	+ 8.4	-21 6.8	1 1 59.4	- 1 52.7	+1.2297	0.6046	-0.0039	+69	+52
128 B. Sagittarii	6.3	1.32	8.7	21 4.7	4 29.4	+ 0 31.3	+1.1923	0.6039	+0.0019	+69	+46
29 Sagittarii	5.3	1.33	9.1	20 24.6	6 12.1	+ 2 9.9	+0.5300	0.6035	0.0058	+50	- 6
36 Sagittarii	5.1	1.36	9.1	20 45.3	9 12.0	+ 5 2.7	+0.9040	0.6026	0.0126	+70	+18
171 B. Sagittarii	6.1	1.38	9.7	19 21.3	11 27.8	+ 7 13.1	-0.4675	0.6019	0.0177	- 8	-67
173 B. Sagittarii	6.4	+1.38	+ 9.8	-19 12.7	11 29.2	+ 7 14.4	-0.6110	0.6019	+0.0178	-16	-81
187 B. Sagittarii	6.4	1.39	10.0	18 51.2	13 4.4	+ 8 45.8	-0.9393	0.6013	0.0214	-37	-90
190 B. Sagittarii	5.4	1.40	9.9	19 24.5	13 30.8	+ 9 11.2	-0.3730	0.6012	0.0223	- 3	-60
195 B. Sagittarii	6.3	1.41	9.7	19 55.3	14 6.4	+ 9 45.4	+0.1574	0.6010	0.0237	+26	-27
d Sagittarii	5.0	1.43	10.2	19 5.2	17 12.6	-11 15.8	-0.5990	0.5999	0.0306	-15	-80
226 B. Sagittarii	6.4	+1.45	+10.3	-19 22.5	18 46.9	- 9 45.2	-0.2583	0.5993	+0.0341	+ 4	-52

508 ELEMENTS OF OCCULTATIONS, 1924.

NOVEMBER.

THE STAR'S				AT CONJUNCTION IN R.A.					Limiting Parallels.	
Name.	Mag.	Reductions from 1924.0		Apparent Declina- tion.	Greenwich Mean Time.	Hour Angle, H	γ	z'	y'	N. S.
		$\Delta\alpha$	$\Delta\delta$		d h m	h m				
45 Sagittarii	6.0	+1.45	+10.5	-18 26.8	1 18 52.9	- 9 39.4	-1.1892	0.5993	+0.0343	-58 -90
266 B. Sagittarii	6.1	1.51	10.8	19 1.1	2 0 40.8	- 4 5.2	-0.3792	0.5968	0.0468	- 1 -60
267 B. Sagittarii	5.8	1.51	11.0	18 23.9	0 56.2	- 3 50.4	-0.9942	0.5967	0.0474	-38 -90
f Sagittarii	5.1	1.56	10.6	19 56.5	4 39.1	- 0 16.2	+0.7571	0.5950	0.0553	+71 + 8
57 Sagittarii	6.0	1.58	11.0	19 14.2	7 0.4	+ 1 59.6	+0.1791	0.5939	0.0603	+31 -26
σ Capricorni	5.5	+1.70	+11.6	-19 21.2	18 4.7	-11 21.4	+1.0919	0.5881	+0.0823	+71 +33
π Capricorni	5.2	1.73	12.1	18 27.5	21 21.6	- 8 12.1	+0.4619	0.5862	0.0885	+52 -10
ρ Capricorni	5.0	1.74	12.3	18 3.8	22 0.1	- 7 35.0	+0.1159	0.5859	0.0897	+31 -29
ϕ Capricorni	5.6	1.75	12.0	18 49.9	22 25.4	- 7 10.6	+0.9387	0.5857	0.0905	+72 +20
47 B. Capricorni	6.2	1.77	12.8	16 47.1	3 0 47.2	- 4 54.1	-0.9312	0.5843	0.0949	-29 -90
ν Capricorni	5.3	+1.79	+12.4	-18 24.2	2 39.4	- 3 6.1	+0.9026	0.5833	+0.0982	+72 +17
61 B. Capricorni	5.9	1.78	13.2	16 23.5	2 53.1	- 2 52.8	-1.1299	0.5831	0.0986	-45 -90
81 B. Capricorni	6.4	1.83	12.5	18 18.8	6 33.5	+ 0 39.4	+1.2092	0.5810	0.1051	+72 +46
94 B. Capricorni	5.7	1.86	13.4	16 19.2	10 6.1	+ 4 4.1	-0.4477	0.5789	0.1111	+ 2 -65
21 Capricorni	6.5	1.88	12.9	17 49.5	11 26.7	+ 5 21.9	+1.2446	0.5780	0.1133	+73 +51
θ Capricorni	4.2	+1.90	+13.0	-17 31.9	13 36.7	+ 7 27.1	+1.1956	0.5767	+0.1169	+73 +43
29 Capricorni	5.5	1.94	14.0	15 29.1	17 50.6	+11 31.8	-0.3994	0.5742	0.1235	+ 6 -61
42 Capricorni	5.1	2.04	14.4	14 23.0	4 5 7.4	- 1 35.6	-0.0496	0.5674	0.1397	+27 -39
44 Capricorni	6.0	2.06	14.5	14 44.6	5 47.4	- 0 56.9	+0.4169	0.5671	0.1406	+55 -13
45 Capricorni	5.8	2.06	14.4	15 5.7	6 12.3	- 0 32.8	+0.8383	0.5668	0.1411	+75 +12
151 B. Capricorni	6.1	+2.08	+15.2	-13 4.4	8 44.2	+ 1 53.8	-0.8921	0.5653	+0.1444	-21 -90
μ Capricorni	5.2	2.12	14.9	13 54.4	10 19.7	+ 3 26.0	+0.2021	0.5645	0.1464	+42 -25
e Aquarii	5.4	2.18	15.6	11 56.1	18 9.4	+10 59.6	-0.6624	0.5600	0.1557	- 5 -85
42 Aquarii	5.5	2.21	15.2	13 12.4	20 57.7	-10 17.9	+1.1028	0.5584	0.1588	+77 +31
σ Aquarii	4.9	2.27	15.9	11 3.8	5 3 20.1	- 4 8.4	-0.0991	0.5550	0.1652	+27 -42
58 Aquarii	6.4	+2.28	+15.8	-11 17.5	3 48.8	- 3 40.7	+0.2181	0.5548	+0.1656	+45 -24
MARS	-0.8	..	..	10 59.2	7 51.0	+ 0 13.6	+0.5796	0.5375	0.1605	+70 - 4
70 Aquarii	6.1	2.35	15.9	10 57.2	11 39.2	+ 3 54.3	+1.1929	0.5508	0.1725	+80 +40
h Aquarii	5.4	2.43	16.6	8 6.0	19 32.1	+11 31.8	-0.4184	0.5472	0.1784	+11 -62
χ Aquarii	5.3	2.47	16.4	8 8.2	6 1 7.6	- 7 3.5	+0.6287	0.5449	0.1820	+76 - 1
317 B. Aquarii	6.3	+2.48	+16.9	- 6 19.1	2 58.7	- 5 15.9	-0.9514	0.5441	+0.1830	-19 -90
24 Piscium	6.1	2.64	17.0	3 34.4	18 40.3	+ 9 56.0	-0.9332	0.5386	0.1899	-18 -90
27 Piscium	5.1	2.66	16.7	3 58.4	21 30.4	-11 19.2	+0.0312	0.5377	0.1907	+38 -34
29 Piscium	5.1	2.68	16.8	3 26.8	23 3.6	- 9 48.9	-0.2329	0.5373	0.1911	+24 -49
4 Ceti	6.3	2.70	16.8	2 58.0	7 1 59.2	- 6 58.8	-0.1827	0.5365	0.1918	+26 -46
5 Ceti	6.3	+2.70	+16.8	- 2 51.9	2 13.1	- 6 45.3	-0.2461	0.5364	+0.1918	+23 -50
54 B. Ceti	6.3	2.76	16.3	2 38.1	10 19.9	+ 1 6.5	+1.0708	0.5345	0.1931	+88 +27
10 Ceti	6.4	2.80	16.8	0 27.9	11 23.4	+ 2 8.1	-1.0438	0.5343	0.1931	-25 -90
14 Ceti	5.4	2.83	16.3	- 0 55.1	15 51.4	+ 6 27.9	+0.3032	0.5335	0.1932	+54 -19
26 Ceti	6.0	2.94	15.5	+ 0 57.8	8 6 6.1	- 3 43.3	+1.0312	0.5316	0.1918	+90 +24
33 Ceti	6.1	+2.97	+15.4	+ 2 2.8	9 30.9	- 0 24.7	+0.5205	0.5313	+0.1910	+69 - 8
f Piscium	5.3	3.00	15.3	3 13.1	13 10.8	+ 3 8.7	-0.0455	0.5311	0.1901	+33 -39
117 G. Piscium	6.5	3.03	14.8	3 8.8	17 47.4	+ 7 36.9	+0.9069	0.5309	0.1886	+90 +15
ν Piscium	4.7	3.10	14.3	5 6.5	9 1 9.7	- 9 14.1	+0.1647	0.5308	0.1855	+45 -26
39 B. Arietis	6.5	3.19	13.2	7 22.5	13 1.9	+ 2 16.6	-0.1302	0.5312	0.1792	+29 -43
64 Ceti	5.8	+3.21	+12.8	+ 8 13.1	16 19.8	+ 5 28.6	-0.4605	0.5314	+0.1770	+11 -63
ξ^1 Ceti	4.5	3.23	12.8	8 29.7	17 9.5	+ 6 16.8	-0.6147	0.5314	0.1765	+ 2 -75
25 Arietis	6.5	3.27	11.7	9 51.9	10 26.6	-10 39.2	-0.8428	0.5320	0.1713	-12 -81
ξ^2 Ceti	4.3	3.25	11.7	8 7.4	0 50.0	-10 16.6	+1.1242	0.5321	0.1710	+90 +34
389 B. Ceti	6.3	3.28	11.7	9 13.8	1 32.9	- 9 34.9	+0.0386	0.5321	0.1704	+38 -32
85 Ceti	6.3	+3.32	+10.8	+10 25.3	8 2.9	- 3 16.7	-0.1721	0.5328	+0.1651	+26 -43

ELEMENTS OF OCCULTATIONS, 1924. 509

NOVEMBER.

THE STAR'S					AT CONJUNCTION IN R.A.					Limiting Parallels.	
Name.	Mag.	Reductions from 1924.0		Apparent Declina- tion.	Greenwich Mean Time.	Hour Angle, H	P	α'	γ'	N.	S.
		$\Delta\alpha$	$\Delta\delta$								
μ Ceti	4.4	+3.33	+10.6	+9 47.8	10 9 16.9	-2 5.0	+0.7139	0.5329	+0.1641	+90	+7
147 B. Arietis	5.8	3.40	9.1	12 53.8	20 2.7	+8 21.2	-0.9686	0.5344	0.1540	-21	-78
8 B. Tauri	6.2	3.40	7.8	12 21.8	11 4 56.2	-7 1.6	+0.9468	0.5358	0.1447	+90	+24
f Tauri	4.3	3.42	7.2	12 40.8	8 16.4	-3 47.6	+1.0769	0.5363	0.1410	+90	+34
30 B. Tauri	6.4	3.47	6.6	15 11.0	11 41.2	-0 29.1	-1.2051	0.5369	0.1371	-43	-75
179 B. Tauri	5.9	+3.47	+4.1	+14 57.7	12 2 28.0	-10 9.8	+0.9324	0.5393	+0.1187	+90	+26
193 B. Tauri	6.2	3.51	3.6	17 5.0	4 48.6	-7 53.5	-1.1375	0.5397	0.1155	-37	-73
48 Tauri	6.3	3.47	3.4	15 12.8	6 25.8	-6 19.4	+1.1155	0.5400	0.1133	+90	+41
γ Tauri	3.9	3.47	3.1	15 26.8	8 23.9	-4 25.0	+1.0783	0.5403	0.1106	+90	+38
δ Tauri	3.9	3.52	2.6	17 22.0	9 54.6	-2 57.1	-0.8785	0.5405	0.1085	-15	-73
63 Tauri	5.7	+3.50	+2.6	+16 36.1	10 9.5	-2 42.7	-0.0066	0.5406	+0.1082	+35	-27
64 Tauri	4.9	3.51	2.5	17 16.2	10 28.9	-2 23.9	-0.7104	0.5406	0.1077	-5	-73
68 Tauri	4.3	3.52	2.4	17 45.4	11 9.3	-1 44.7	-1.1756	0.5407	0.1068	-41	-73
70 Tauri	6.4	3.47	2.5	15 46.2	11 14.9	-1 39.3	+1.0314	0.5407	0.1067	+90	+35
75 Tauri	5.2	3.47	2.3	16 11.5	12 37.5	-0 19.3	+0.7100	0.5409	0.1047	+90	+13
θ^1 Tauri	4.2	+3.47	+2.3	+15 47.7	12 41.6	-0 15.3	+1.1552	0.5409	+0.1046	+90	+46
θ^2 Tauri	3.6	3.47	2.3	15 42.3	12 44.2	-0 12.8	+1.2607	0.5410	0.1046	+87	+60
264 B. Tauri	4.8	3.47	2.1	16 1.8	13 39.6	+0 40.8	+0.9960	0.5411	0.1033	+90	+32
119 H ¹ Tauri	6.2	3.51	1.7	17 51.5	15 5.8	+2 4.4	-0.8789	0.5413	0.1013	-16	-73
275 B. Tauri	6.5	3.47	1.9	16 9.9	15 9.8	+2 8.3	+1.0005	0.5413	0.1012	+90	+32
α Tauri (<i>Ald.</i>)	1.1	+3.47	+1.5	+16 21.5	16 16.4	+3 12.8	+0.8988	0.5415	+0.0995	+90	+26
302 B. Tauri	6.1	3.51	+0.4	18 35.9	21 17.2	+8 4.1	-1.1010	0.5422	0.0922	-34	-72
i Tauri	5.1	3.50	0.0	18 42.7	23 45.6	+10 27.8	-1.0031	0.5426	0.0885	-25	-72
318 B. Tauri	5.7	3.45	-0.3	17 2.1	13 24.0	-10 41.3	+1.1081	0.5430	0.0841	+90	+44
m Tauri	5.0	3.50	1.3	18 32.6	7 32.0	-6 0.5	-0.1751	0.5436	0.0767	+26	-33
353 B. Tauri	6.5	+3.46	-2.7	+19 44.3	14 3.3	+0 18.4	-1.0329	0.5443	+0.0664	-28	-71
115 Tauri	5.3	3.40	2.9	17 53.9	17 4.9	+3 14.2	+1.2032	0.5447	0.0616	+90	+57
119 Tauri	4.9	3.40	3.4	18 32.3	19 30.0	+5 34.7	+0.6366	0.5449	0.0577	+84	+14
120 Tauri	5.6	3.40	3.5	18 29.2	20 8.0	+6 11.5	+0.7303	0.5449	0.0567	+90	+19
B. D. + 19° 11.0	6.0	3.37	5.3	19 50.9	14 5 10.2	-9 3.8	-0.3358	0.5456	0.0418	+17	-39
χ^1 Orionis	4.5	+3.36	-5.6	+20 15.7	6 7.6	-8 8.2	-0.7563	0.5456	+0.0403	-8	-70
57 Orionis	5.8	3.36	5.5	19 44.1	6 23.7	-7 52.5	-0.1599	0.5457	0.0398	+27	-28
64 Orionis	5.1	3.33	6.1	19 41.5	10 28.4	-3 55.7	+0.0365	0.5459	0.0330	+38	-16
χ^2 Orionis	4.7	3.34	6.2	20 8.4	10 41.3	-3 43.3	-0.4545	0.5459	0.0327	+10	-46
68 Orionis	5.7	3.30	6.8	19 48.4	14 34.3	+0 2.3	+0.0294	0.5460	0.0261	+38	-17
71 Orionis	5.1	+3.26	-7.0	+19 10.9	15 56.2	+1 21.6	+0.7581	0.5461	+0.0238	+90	+25
15 Geminorum	6.5	3.25	8.3	20 50.1	22 5.3	+7 18.8	-0.9637	0.5462	0.0134	-23	-70
16 Geminorum	6.2	3.24	8.2	20 32.4	22 10.4	+7 23.7	-0.6359	0.5463	0.0132	-1	-60
ν Geminorum	4.1	3.24	8.2	20 15.6	22 39.7	+7 52.1	-0.3170	0.5463	+0.0124	+18	-35
ζ Gem. (<i>var.</i>)	3.7	3.08	10.8	20 40.8	15 15 26.5	+0 6.5	-0.8143	0.5460	-0.0161	-12	-70
56 Geminorum	5.2	+2.97	-11.9	+20 35.1	23 58.2	+8 21.8	-0.9072	0.5456	-0.0305	-18	-70
61 Geminorum	5.8	2.95	12.1	20 24.4	18 2 21.5	+10 40.5	-0.7875	0.5454	0.0346	-10	-70
79 Geminorum	6.3	2.84	13.1	20 29.8	11 4.7	-4 53.1	-1.2488	0.5448	0.0491	-56	-70
g Geminorum	5.0	2.80	12.7	18 41.6	11 34.2	-4 24.6	+0.7202	0.5448	0.0499	+90	+20
209 B. Geminorum	6.2	2.78	13.2	19 31.0	14 21.0	-1 43.2	-0.3357	0.5445	0.0544	+17	-41
85 Geminorum	5.2	+2.77	-13.6	+20 4.9	16 7.4	-0 0.2	-1.0584	0.5444	-0.0573	-30	-70
217 B. Geminorum	6.3	2.74	13.8	20 1.3	18 35.2	+2 23.0	-1.1375	0.5442	0.0613	-38	-70
10 H. Cancri	6.1	2.70	13.7	19 3.2	20 30.1	+4 14.2	-0.1894	0.5440	0.0644	+25	-33
ζ Can. (<i>mean</i>)	4.7	2.65	13.7	17 52.5	17 0 5.8	+7 43.0	+0.8692	0.5436	0.0702	+90	+27
d^1 Cancri	5.9	2.58	14.4	18 34.4	5 27.6	-11 5.5	-0.3000	0.5431	0.0786	+19	-41
d^2 Cancri	6.2	+2.54	-14.1	+17 17.6	6 40.2	-9 55.2	+1.0114	0.5430	-0.0805	+90	+36

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NOVEMBER.

THE STAR'S					AT CONJUNCTION IN R.A.					Limiting Parallels.	
Name.	Mag.	Reductions from 1924.0		Apparent Declination.	Greenwich Mean Time.	Hour Angle, H	Y	z'	y'	N.	S.
		$\Delta\alpha$	$\Delta\delta$								
θ Cancri	5.5	+2.53	-14.6	+18 20.9	17 9 25.8	- 7 14.9	-0.3762	0.5428	-0.0848	+15	-47
δ Cancri	4.2	2.45	15.3	18 25.8	15 44.8	- 1 7.9	-1.0308	0.5420	-0.0944	-27	-72
X Can. (var.)	6.2	2.37	15.1	17 31.0	20 55.8	+ 3 53.2	-0.5378	0.5416	0.1021	+ 6	-60
α^a Cancri	5.7	2.35	14.6	15 52.2	22 0.7	+ 4 56.0	+1.1539	0.5415	0.1036	+90	+46
81 Cancri	6.4	2.21	14.5	15 18.0	18 5 10.2	+11 51.7	+0.9965	0.5409	0.1139	+90	+31
π Cancri	5.6	+2.22	-14.8	+15 15.2	6 34.5	-10 46.5	+0.8843	0.5408	-0.1158	+90	+23
227 B. Cancri	6.4	2.19	15.1	15 41.4	9 29.8	- 7 56.8	+0.0634	0.5406	0.1199	+39	-25
7 Leonis	6.2	2.09	15.0	14 42.9	16 36.8	- 1 3.3	+0.2364	0.5401	0.1293	+50	-15
11 Leonis	6.5	2.08	15.0	14 41.2	17 39.3	- 0 2.7	+0.1312	0.5400	0.1307	+44	-22
ψ Leonis	5.6	2.04	15.0	14 22.0	20 26.0	+ 2 38.8	+0.1117	0.5399	0.1343	+42	-23
NEPTUNE	7.7	..	..	+14 16.6	20 41.5	+ 2 53.7	+0.1745	0.5398	-0.1346	+47	-20
ν Leonis	5.0	+1.94	-14.5	12 48.2	19 3 30.2	+ 9 29.4	+0.8197	0.5397	0.1431	+90	+15
α Leon. (Reg.)	1.3	1.87	14.4	12 20.1	8 27.6	- 9 42.5	+0.5994	0.5396	0.1489	+78	+2
34 Leonis	6.4	1.86	14.9	13 43.6	10 1.8	- 8 11.3	-1.1341	0.5396	0.1508	-34	-77
1 Leonis	5.3	1.64	13.7	10 56.6	20 4 21.7	+ 9 34.0	-1.0878	0.5403	0.1700	-30	-80
γ Leonis	4.7	+1.54	-12.4	+ 7 44.6	12 2.1	- 7 0.1	+0.9804	0.5412	-0.1769	+90	+23
308 B. Leonis	5.8	1.51	12.6	8 28.4	16 22.7	- 2 47.8	-0.5684	0.5418	0.1805	+ 5	-71
σ Leonis	4.1	1.47	11.7	6 26.6	19 49.3	+ 0 32.3	+0.9482	0.5423	0.1832	+90	+20
b Virginis	5.2	1.29	10.0	4 4.5	21 14 25.0	- 5 27.9	-0.1011	0.5466	0.1950	+30	-42
10 Virginis	6.2	1.27	9.3	+ 2 19.3	19 1.9	- 1 0.0	+0.8158	0.5480	0.1972	+90	+ 9
γ Vir. (mean)	2.9	+1.12	- 7.1	- 1 2.1	22 10 1.6	-10 29.8	+1.2749	0.5536	-0.2018	+89	+48
65 Virginis	6.0	1.04	4.6	4 31.7	23 5 1.2	+ 7 51.3	+0.9827	0.5626	0.2018	+86	+21
66 Virginis	5.7	1.05	4.5	4 46.1	5 34.1	+ 8 23.1	+1.1149	0.5629	0.2017	+86	+31
80 Virginis	5.6	1.01	3.9	5 0.6	10 28.4	-10 52.8	+0.3711	0.5656	0.2004	+58	-16
566 B. Virginis	6.4	0.98	3.6	5 7.1	14 11.4	- 7 17.6	-0.2638	0.5677	0.1992	+21	-51
88 Virginis	6.5	+0.98	- 3.2	- 6 27.6	16 7.2	- 5 25.8	+0.7043	0.5688	-0.1984	+84	+ 3
235 G. Virginis	6.5	0.93	- 1.9	7 11.2	24 5 0.0	+ 6 59.5	-1.0773	0.5767	0.1911	-30	-90
NEW MOON.					28 5 45.0	+ 3 53.5	+0.5569	0.6172	-0.0184	+52	- 4
21 Sagittarii	5.0	+1.04	+ 8.1	-20 34.9	7 35.2	+ 5 39.1	-1.2486	0.6168	-0.0139	-67	-85
95 B. Sagittarii	5.7	+1.04	+ 8.5	-18 46.5	10 49.2	+ 8 45.0	+1.0200	0.6164	-0.0059	+69	+27
121 B. Sagittarii	5.9	1.06	8.3	21 6.8	13 13.6	+11 3.4	+0.9783	0.6159	0.0000	+69	+24
128 B. Sagittarii	6.3	1.09	8.6	21 4.7	14 52.5	-11 21.9	+0.3239	0.6154	+0.0040	+35	-17
29 Sagittarii	5.3	1.09	8.8	20 24.6	17 45.7	- 8 35.8	+0.6860	0.6146	0.0111	+65	+ 4
36 Sagittarii	5.1	1.11	8.9	20 45.3	17 54.1	- 8 27.8	+1.1326	0.6145	+0.0114	+69	+38
ξ Sagittarii	3.7	+1.12	+ 8.8	-21 12.3	19 56.4	- 6 30.5	-0.6663	0.6140	0.0163	-20	-89
171 B. Sagittarii	6.1	1.11	9.3	19 21.3	19 57.7	- 6 29.3	-0.8074	0.6140	0.0164	-28	-90
173 B. Sagittarii	6.4	1.12	9.4	19 12.7	21 29.4	- 5 1.4	-1.1329	0.6134	0.0201	-53	-90
187 B. Sagittarii	6.4	1.12	9.5	18 51.2	21 54.8	- 4 37.0	-0.5769	0.6133	0.0211	-14	-77
190 B. Sagittarii	5.4	1.13	9.5	19 24.5	22 27.3	- 4 5.9	+1.1500	0.6131	+0.0224	+69	+40
π Sagittarii	3.0	+1.14	+ 9.1	-21 8.6	22 29.0	- 4 4.1	-0.0566	0.6131	0.0225	+14	-39
195 B. Sagittarii	6.3	1.14	9.3	19 55.3	1 28.2	+ 1 12.4	-0.8054	0.6119	0.0296	-27	-90
d Sagittarii	5.0	1.15	9.7	19 5.2	2 59.0	+ 0 14.7	-0.4731	0.6113	0.0332	- 8	-68
226 B. Sagittarii	6.4	1.16	9.8	19 22.5	8 39.5	+ 5 41.3	-0.6014	0.6087	0.0463	-14	-80
266 B. Sagittarii	6.1	1.20	10.1	19 1.1	8 54.3	+ 5 55.5	-1.2064	0.6085	+0.0469	-59	-90
267 B. Sagittarii	5.8	+1.20	+10.3	-18 23.9	12 28.9	+ 9 21.3	+0.5095	0.6067	0.0550	+52	- 7
f Sagittarii	5.1	1.23	10.0	19 56.5	14 44.9	+11 31.9	-0.0621	0.6055	0.0601	+18	-39
57 Sagittarii	6.0	1.26	10.3	19 14.2	30 1 25.0	- 2 13.5	+0.8209	0.5990	0.0829	+71	+12
σ Capricorni	5.5	1.35	10.8	19 21.2	4 34.9	+ 0 48.9	+0.1974	0.5969	0.0892	+34	-25
π Capricorni	5.2	1.38	11.1	18 27.5	5 12.1	+ 1 24.6	-0.1438	0.5965	+0.0904	+16	-44
q Capricorni	5.0	+1.38	+11.2	-18 3.8							

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NOVEMBER.

THE STAR'S				AT CONJUNCTION IN R.A.					Limiting Parallels.	
Name.	Mag.	Reductions from 1924.0		Apparent Declina- tion.	Greenwich Mean Time.	Hour Angle, H	γ	α'	η'	N. S.
		$\Delta\alpha$	$\Delta\delta$							
o Capricorni	5.6	+1.39	+11.0	-18 50.0	30 5 36.4	+ 1 48.0	+0.6652	0.5962	+0.0912	+69 + 2
47 B. Capricorni	6.2	+1.40	+11.7	16 47.1	7 53.4	+ 3 59.7	-1.1774	0.5947	0.0957	-50 -90
v Capricorni	5.3	+1.42	+11.3	18 24.2	9 41.7	+ 5 43.9	+0.6253	0.5934	0.0991	+65 0
81 B. Capricorni	6.4	+1.46	+11.4	18 18.8	13 27.9	+ 9 21.3	+0.9234	0.5908	0.1061	+72 +19
19 Capricorni	5.7	+1.47	+11.5	18 12.5	15 41.9	+11 30.3	+1.0600	0.5891	0.1101	+72 +29
94 B. Capricorni	5.7	+1.49	+12.1	-16 19.3	16 53.6	-11 20.8	-0.7116	0.5883	+0.1123	-13 -90
21 Capricorni	6.5	+1.50	+11.6	17 49.5	18 11.6	-10 5.7	+0.9542	0.5873	0.1145	+73 +21
θ Capricorni	4.2	+1.52	+11.7	-17 32.0	20 17.6	- 8 4.5	+0.9044	0.5858	+0.1181	+73 +17

DECEMBER.

29 Capricorni	5.5	+1.56	+12.5	-15 29.1	1 0 23.7	- 4 7.5	-0.6709	0.5827	+0.1248	-10 -88
42 Capricorni	5.1	+1.66	+12.6	14 23.0	11 21.4	+ 6 26.2	-0.3333	0.5746	0.1413	+11 -56
44 Capricorni	6.0	+1.68	+12.8	14 44.7	12 0.4	+ 7 3.7	+0.1270	0.5741	0.1422	+37 -29
45 Capricorni	5.8	+1.68	+12.7	15 5.7	12 24.6	+ 7 27.0	+0.5428	0.5738	0.1428	+64 - 6
151 B. Capricorni	6.1	+1.71	+13.4	-13 4.4	14 52.6	+ 9 49.7	-1.1672	0.5720	+0.1461	-44 -90
μ Capricorni	5.2	+1.74	+13.1	13 54.4	16 25.8	+11 19.6	-0.0871	0.5709	0.1481	+27 -41
i Aquarii	4.4	+1.78	+12.9	14 14.1	22 12.4	- 7 6.0	+1.1281	0.5667	0.1552	+76 +34
e Aquarii	5.4	+1.80	+13.8	11 56.1	2 0 4.7	- 5 17.7	-0.9441	0.5653	0.1573	-23 -90
42 Aquarii	5.5	+1.83	+13.3	13 12.4	2 49.5	- 2 38.6	+0.8016	0.5633	0.1603	+77 + 9
σ Aquarii	4.9	+1.90	+13.9	-11 3.8	9 4.6	+ 3 23.6	-0.3881	0.5591	+0.1667	+12 -60
58 Aquarii	6.4	+1.91	+13.8	11 17.5	9 32.7	+ 3 50.8	-0.0738	0.5588	0.1672	+29 -40
70 Aquarii	6.1	+2.00	+13.8	10 57.2	17 15.6	+11 18.1	+0.8941	0.5538	0.1740	+80 +15
h Aquarii	5.4	+2.09	+14.6	8 6.0	3 1 2.3	- 5 10.6	-0.7016	0.5491	0.1798	- 5 -90
χ Aquarii	5.3	+2.14	+14.3	8 8.2	6 34.4	+ 0 10.7	+0.3414	0.5461	0.1832	+56 -17
317 B. Aquarii	6.3	+2.16	+14.8	- 6 19.1	8 24.5	+ 1 57.2	-1.2280	0.5452	+0.1843	-43 -90
24 Piscium	6.1	+2.36	+15.0	3 34.4	4 0 1.0	- 6 56.1	-1.1992	0.5378	0.1908	-38 -90
27 Piscium	5.1	+2.38	+14.7	3 58.4	2 50.8	- 4 11.5	-0.2354	0.5366	0.1916	+23 -50
29 Piscium	5.1	+2.41	+14.8	3 26.8	4 23.8	- 2 41.4	-0.4969	0.5360	0.1920	+ 9 -68
4 Ceti	6.3	+2.44	+14.8	2 58.1	7 19.3	+ 0 8.7	-0.4436	0.5350	0.1926	+12 -63
5 Ceti	6.3	+2.44	+14.8	- 2 52.0	7 33.2	+ 0 22.1	-0.5067	0.5349	+0.1927	+ 9 -68
54 B. Ceti	6.3	+2.53	+14.3	2 38.1	15 40.6	+ 8 14.6	+0.8182	0.5323	0.1936	+88 +10
10 Ceti	6.4	+2.57	+15.0	0 28.0	16 44.2	+ 9 16.2	-1.2915	0.5320	0.1937	-50 -90
14 Ceti	5.4	+2.61	+14.4	- 0 55.1	21 13.2	-10 22.9	+0.0600	0.5308	0.1938	+40 -33
26 Ceti	6.0	+2.78	+13.8	+ 0 57.8	5 11 32.7	+ 3 30.6	+0.8119	0.5280	0.1923	+90 + 9
33 Ceti	6.1	+2.82	+13.8	+ 2 2.7	14 59.1	+ 6 50.9	+0.3073	0.5276	+0.1916	+54 -20
f Piscium	5.3	+2.87	+13.8	3 13.1	18 40.8	+10 26.0	-0.2524	0.5272	0.1905	+22 -51
117 G. Piscium	6.5	+2.91	+13.3	3 8.7	23 19.9	- 9 3.3	+0.7099	0.5268	0.1891	+90 + 3
v Piscium	4.7	+3.01	+13.0	5 6.4	6 46.5	- 1 49.9	-0.0182	0.5265	0.1861	+35 -36
39 B. Arietis	6.5	+3.16	+12.1	7 22.5	18 46.3	+ 9 48.5	-0.2884	0.5268	0.1799	+20 -52
64 Ceti	5.8	+3.19	+11.8	+ 8 13.1	22 6.3	-10 57.5	-0.6121	0.5270	+0.1778	+ 2 -77
ξ ¹ Ceti	4.5	+3.21	+11.8	8 29.6	22 56.5	-10 8.7	-0.7648	0.5271	0.1772	- 7 -82
25 Arietis	6.5	+3.28	+11.0	9 51.9	7 618.5	- 3 0.0	-0.9771	0.5278	0.1722	-21 -81
ξ ² Ceti	4.3	+3.27	+10.7	8 7.4	6 42.2	- 2 37.0	+0.9960	0.5278	0.1719	+90 +24
389 B. Ceti	6.3	+3.30	+10.8	9 13.8	7 25.6	- 1 55.0	-0.0908	0.5279	0.1714	+31 -39
85 Ceti	6.3	+3.37	+10.1	+10 25.3	13 59.8	+ 4 27.6	-0.2869	0.5288	+0.1662	+20 -50
μ Ceti	4.4	+3.39	+9.8	9 47.8	15 14.6	+ 5 40.1	+0.6045	0.5290	0.1651	+78 0
147 B. Arietis	5.8	+3.52	+8.7	12 53.8	8 2 7.1	- 7 47.0	-1.0571	0.5308	0.1553	-28 -78
8 B. Tauri	6.2	+3.56	+7.2	12 21.8	11 5.6	+ 0 55.3	+0.8852	0.5326	0.1462	+90 +20
f Tauri	4.3	+3.59	+6.7	12 40.7	14 27.6	+ 4 11.2	+1.0238	0.5333	0.1426	+90 +30
30 B. Tauri	6.4	+3.67	+6.4	+15 11.0	17 54.1	+ 7 31.3	-1.2561	0.5341	+0.1387	-50 -75

512 ELEMENTS OF OCCULTATIONS, 1924.

DECEMBER.

THE STAR'S					AT CONJUNCTION IN R.A.					Limiting Parallels.	
Name.	Mag.	Reductions from 1924.0		Apparent Declination.	Greenwich Mean Time.	Hour Angle, H	P	x'	y'	N.	S.
		$\Delta\alpha$	$\Delta\delta$								
179 B. Tauri	5.9	+3.75	+3.7	+14 57.7	9 8 47.1	-2 3.2	+0.9224	0.5374	+0.1206	+90	+25
193 B. Tauri	6.2	3.80	3.4	17 5.0	11 8.6	+0.13.9	-1.1467	0.5380	0.1175	-37	-73
48 Tauri	6.3	3.77	3.0	15 12.8	12 46.2	+1 48.6	+1.1153	0.5383	0.1153	+90	+41
γ Tauri	3.9	3.78	2.6	15 26.8	14 45.0	+3 43.7	+1.0827	0.5388	0.1127	+90	+38
δ Tauri	3.9	3.84	2.5	17 22.0	16 16.2	+5 12.1	-0.8748	0.5391	0.1107	-15	-73
63 Tauri	5.7	+3.82	+2.4	+16 36.1	16 31.1	+5 26.5	-0.0004	0.5391	+0.1104	+36	-27
64 Tauri	4.9	3.84	2.4	17 16.2	16 50.6	+5 45.4	-0.7049	0.5392	0.1098	-4	-74
68 Tauri	4.3	3.85	2.3	17 45.4	17 31.2	+6 24.7	-1.1695	0.5394	0.1089	-40	-73
70 Tauri	6.4	3.80	2.1	15 46.1	17 36.8	+6 30.2	+1.0424	0.5394	0.1087	+90	+36
75 Tauri	5.2	3.80	1.9	16 11.5	18 59.8	+7 50.5	+0.7235	0.5397	0.1069	+90	+14
θ^1 Tauri	4.2	+3.80	+1.9	+15 47.7	19 3.8	+7 54.4	+1.1698	0.5397	+0.1068	+90	+47
θ^2 Tauri	3.6	3.80	1.8	15 42.2	19 6.5	+7 57.0	+1.2756	0.5398	0.1067	+84	+63
264 B. Tauri	4.8	3.81	1.7	16 1.8	20 2.2	+8 51.0	+1.0125	0.5400	0.1054	+90	+33
119 H. Tauri	6.2	3.86	1.5	17 51.5	21 28.7	+10 14.8	-0.8628	0.5402	0.1034	-14	-73
275 B. Tauri	6.5	3.81	1.5	16 9.9	21 32.7	+10 18.7	+1.0205	0.5403	0.1033	+90	+34
α Tauri (<i>Ald.</i>)	1.1	+3.82	+1.1	+16 21.5	22 39.6	+11 23.5	+0.9213	0.5405	+0.1017	+90	+27
302 B. Tauri	6.1	3.90	+0.3	18 35.9	10 3 41.3	-7 44.3	-1.0707	0.5416	0.0945	-31	-72
ϵ Tauri	5.1	3.91	-0.1	18 42.7	6 10.1	-5 20.2	-0.9668	0.5421	0.0908	-22	-72
318 B. Tauri	5.7	3.86	0.7	17 2.1	9 6.9	-2 28.9	+1.1548	0.5427	0.0864	+90	+48
m Tauri	5.0	3.94	1.6	18 32.6	13 57.5	+2 12.5	-0.1196	0.5436	0.0789	+29	-30
353 B. Tauri	6.5	+3.94	-3.0	+19 44.3	20 29.1	+8 31.7	-0.9641	0.5447	+0.0687	-22	-71
119 Tauri	4.9	3.90	4.0	18 32.3	11 1 55.8	-10 12.0	+0.7198	0.5455	0.0600	+90	+19
120 Tauri	5.6	3.90	4.1	18 29.2	2 33.8	-9 35.2	+0.8150	0.5456	0.0589	+90	+25
B.D. +19° 1110	6.0	3.92	5.9	19 50.9	11 35.4	-0 51.0	-0.2333	0.5468	0.0441	+23	-34
χ^1 Orionis	4.5	3.92	6.2	20 15.7	12 32.7	+0 4.6	-0.6524	0.5469	0.0425	-2	-63
57 Orionis	5.8	+3.92	-6.2	+19 44.1	12 48.9	+0 20.2	-0.0546	0.5469	+0.0420	+33	-22
64 Orionis	5.1	3.91	6.9	19 41.5	16 53.1	+4 16.6	+0.1505	0.5473	0.0352	+45	-11
γ^2 Orionis	4.7	3.92	7.0	20 8.4	17 6.0	+4 29.0	-0.3406	0.5473	0.0348	+16	-39
68 Orionis	5.7	3.90	7.7	19 48.4	20 58.5	+8 14.0	+0.1518	0.5476	0.0282	+45	-10
71 Orionis	5.1	3.87	8.1	19 10.9	22 20.2	+9 33.2	+0.8841	0.5477	0.0259	+90	+32
15 Geminorum	6.5	+3.89	-9.2	+20 50.1	12 4 28.4	-8 30.6	-0.8277	0.5480	+0.0154	-13	-70
16 Geminorum	6.2	3.88	9.2	20 32.4	4 33.4	-8 25.7	-0.4994	0.5480	0.0152	+7	-49
ν Geminorum	4.1	3.88	9.3	20 15.5	5 2.8	-7 57.3	-0.1791	0.5480	+0.0144	+26	-27
ζ Gem. (<i>var.</i>)	3.7	3.79	12.3	20 40.8	21 46.7	+8 14.2	-0.6460	0.5480	-0.0144	-1	-61
56 Geminorum	5.2	3.72	13.7	20 35.1	13 6 17.1	-7 31.8	-0.7244	0.5475	0.0290	-6	-70
61 Geminorum	5.8	+3.70	-14.0	+20 24.4	8 40.0	-5 13.5	-0.6005	0.5472	-0.0330	+2	-58
79 Geminorum	6.3	3.63	15.3	20 29.7	17 22.3	+3 11.9	-1.0493	0.5464	0.0476	-30	-70
θ Geminorum	5.0	3.59	15.1	18 41.5	17 51.8	+3 40.5	+0.9259	0.5464	0.0485	+90	+33
209 B. Geminorum	6.2	3.58	15.6	19 31.0	20 38.4	+6 21.7	-0.1286	0.5460	0.0530	+28	-28
85 Geminorum	5.2	3.58	16.0	20 4.9	22 24.7	+8 4.7	-0.8509	0.5458	0.0560	-14	-70
217 B. Geminorum	6.3	+3.55	-16.3	+20 1.3	14 0 52.5	+10 27.7	-0.9269	0.5455	-0.0600	-20	-70
10 H. Cancri	6.1	3.52	16.4	19 3.2	2 47.4	-11 41.1	+0.0272	0.5452	0.0631	+37	-21
ζ Can. (<i>mean</i>)	4.7	3.47	16.7	17 52.4	6 23.1	-8 12.3	+1.0949	0.5447	0.0689	+90	+44
d^1 Cancri	5.9	3.42	17.4	18 34.3	11 45.2	-3 0.5	-0.0713	0.5439	0.0774	+32	-27
d^2 Cancri	6.2	3.37	17.3	17 17.6	12 58.0	-1 50.0	+1.2474	0.5437	0.0793	+88	+61
θ Cancri	5.5	+3.37	-17.8	+18 20.8	15 43.9	+0 50.7	-0.1427	0.5432	-0.0836	+28	-32
δ Cancri	4.2	3.31	18.7	18 25.8	22 4.1	+6 58.8	-0.7930	0.5421	0.0932	-10	-72
χ Cancri (<i>var.</i>)	6.2	3.24	18.7	17 31.0	15 3 16.5	-11 58.7	-0.2916	0.5412	0.1009	-20	-43
81 Cancri	6.4	3.09	18.6	15 17.9	11 34.0	-3 56.8	+1.2611	0.5398	0.1127	+88	+58
π Cancri	5.6	3.10	18.9	15 15.1	12 59.0	-2 34.5	+1.1498	0.5396	0.1147	+90	+44
227 B. Cancri	6.4	+3.07	-19.2	+15 41.4	15 55.7	+0 16.7	+0.3261	0.5390	-0.1187	+56	-10

ELEMENTS OF OCCULTATIONS, 1924. 513

DECEMBER.

THE STAR'S					AT CONJUNCTION IN R.A.					Limiting Parallels.	
Name.	Mag.	Reductions from 1924 ^o		Apparent Declina- tion.	Greenwich Mean Time.	Hour Angle, H	γ	α'	γ'	N.	S.
		$\Delta\alpha$	$\Delta\delta$								
12 B. Leonis	6.3	+3.05	-19.7	+16 54.5	15 18 1.1	+ 2 18.2	-1.2623	0.5387	-0.1214	-53	-74
7 Leonis	6.2	2.98	19.4	14 42.8	23 6.9	+ 7 14.4	+0.5068	0.5379	0.1280	+70	- 1
11 Leonis	6.5	2.96	19.5	14 41.2	16 0 10.1	+ 8 15.6	+0.4016	0.5377	0.1294	+61	- 8
ψ Leonis	5.6	2.93	19.5	14 21.9	258.8	+10 59.0	+0.3841	0.5373	0.1330	+60	- 9
NEPTUNE	7.7	..	..	14 19.5	3 0.5	+11 0.7	+0.4244	0.5379	0.1332	+64	- 6
ν Leonis	5.0	+2.84	-19.3	+12 48.1	10 8.6	- 6 4.6	+1.1034	0.5363	-0.1416	+90	+36
α Leon. (Reg.)	1.3	2.76	19.3	12 20.0	15 10.5	- 1 12.0	+0.8843	0.5357	0.1474	+90	+20
34 Leonis	6.4	2.77	19.8	13 43.5	16 46.3	+ 0 20.9	-0.8658	0.5355	0.1491	-14	-77
ι Leonis	5.3	2.53	19.1	10 56.5	17 11 28.0	+ 5 32.1	-0.8164	0.5343	0.1680	-10	-80
χ Leonis	4.7	2.42	18.0	7 44.5	19 19.6	+ 2 5.0	+1.2779	0.5343	0.1748	+90	+52
308 B. Leonis	5.8	+2.39	-18.2	+ 8 28.3	23 47.0	+ 6 24.1	-0.2922	0.5344	-0.1782	+20	-51
σ Leonis	4.1	2.35	17.3	6 26.5	18 3 19.3	+ 9 49.8	+1.2442	0.5346	0.1808	+90	+45
b Virginis	5.2	2.15	15.7	4 4.5	22 28.9	+ 4 23.8	+0.1704	0.5372	0.1923	+46	-27
10 Virginis	6.2	2.12	15.0	+ 2 19.2	19 3 15.0	+ 9 0.9	+1.0977	0.5383	0.1944	+90	+29
65 Virginis	6.0	1.82	9.6	- 4 31.8	20 14 26.7	- 4 55.1	+1.2223	0.5516	0.1993	+86	+42
80 Virginis	5.6	+1.77	- 8.8	- 5 0.7	20 5.7	+ 0 32.6	+0.5915	0.5546	-0.1981	+77	- 4
566 B. Virginis	6.4	1.73	8.5	5 7.1	23 56.6	+ 4 15.7	-0.0598	0.5568	0.1970	+32	-39
88 Virginis	6.5	1.72	7.9	6 27.7	21 1 56.4	+ 6 11.5	+0.9188	0.5580	0.1963	+84	+17
235 G. Virginis	6.5	1.62	6.4	7 11.3	15 15.2	- 4 57.2	-0.9139	0.5664	0.1895	-18	-90
13 Libræ	5.7	1.52	3.0	11 35.4	22 7 0.3	+10 14.2	+0.6307	0.5776	0.1766	+75	- 1
ξ^a Libræ	5.6	+1.51	- 3.0	-11 6.3	8 1.3	+11 13.0	-0.0348	0.5784	-0.1756	+31	-38
17 Libræ	6.4	1.50	3.0	10 51.1	8 38.5	+11 48.9	-0.3973	0.5788	0.1750	+11	-61
18 Libræ	5.9	1.49	3.0	10 50.4	8 55.7	-11 54.5	-0.4583	0.5791	0.1747	+ 8	-65
130 B. Libræ	5.9	1.43	1.4	12 6.0	19 21.3	- 1 52.1	-0.9567	0.5868	0.1625	-24	-90
γ Libræ	4.0	1.44	- 0.2	14 32.2	23 0 6.5	+ 2 42.2	+0.7095	0.5904	0.1561	+77	+ 4
190 B. Libræ	6.5	+1.42	+ 0.2	-14 48.0	3 18.7	+ 5 47.0	+0.4776	0.5928	-0.1514	+59	- 9
η Libræ	5.5	1.42	0.4	15 25.9	3 34.4	+ 6 2.2	+1.0636	0.5930	0.1510	+75	+29
195 B. Libræ	6.2	1.38	0.5	13 54.3	6 38.2	+ 8 58.9	-0.9042	0.5953	0.1463	-22	-90
202 B. Libræ	6.4	1.37	0.7	14 10.6	8 28.4	+10 44.8	-0.9004	0.5965	0.1433	-22	-90
203 B. Libræ	6.2	1.38	0.9	14 36.4	8 35.7	+10 51.8	-0.4920	0.5967	0.1432	+ 1	-68
48 Libræ	4.6	+1.36	+ 0.9	-14 3.7	9 15.3	+11 29.8	-1.1262	0.5971	-0.1421	-41	-90
49 Libræ	5.4	1.35	1.0	16 18.6	10 6.3	-11 41.1	+0.9764	0.5977	-0.1407	+74	+22
NEW MOON.											
ν Capricorni	5.3	+1.27	+10.7	-18 24.2	27 19 31.1	- 6 38.6	+0.4560	0.6051	+0.0995	+52	-10
81 B. Capricorni	6.4	+1.30	+10.7	-18 18.8	23 9.2	- 3 9.3	+0.7428	0.6026	+0.1068	+72	+ 7
19 Capricorni	5.7	1.30	10.8	18 12.5	28 1 18.2	- 1 5.4	+0.8735	0.6010	0.1109	+72	+15
94 B. Capricorni	5.7	1.31	11.2	16 19.3	2 27.4	+ 0 1.1	-0.8712	0.6002	0.1131	-23	-90
21 Capricorni	6.5	1.32	10.9	17 49.5	3 42.4	+ 1 13.1	+0.7652	0.5993	0.1154	+73	+ 8
θ Capricorni	4.2	1.34	10.9	17 32.0	5 43.8	+ 3 9.7	+0.7127	0.5978	0.1191	+73	+ 5
114 B. Capricorni	6.1	+1.35	+11.0	-17 39.4	9 24.2	+ 6 41.5	+1.2882	0.5950	+0.1257	+74	+60
29 Capricorni	5.5	1.35	11.5	15 29.1	9 40.6	+ 6 57.3	-0.8425	0.5948	0.1262	-20	-90
ι Capricorni	4.3	1.37	11.1	17 9.4	12 17.4	+ 9 28.1	+1.1603	0.5928	0.1306	+73	+39
42 Capricorni	5.1	1.42	11.4	14 23.0	20 13.4	- 6 54.0	-0.5258	0.5866	0.1432	+ 1	-71
44 Capricorni	6.0	1.43	11.6	14 44.7	20 50.9	- 6 18.0	-0.0743	0.5861	0.1441	+25	-40
45 Capricorni	5.8	+1.43	+11.5	-15 5.7	21 14.3	- 5 55.4	+0.3340	0.5858	+0.1446	+49	-17
μ Capricorni	5.2	1.49	11.8	13 54.4	29 1 6.3	- 2 12.1	-0.2902	0.5827	0.1501	+14	-54
ι Aquarii	4.4	1.51	11.6	14 14.2	6 39.8	+ 3 9.1	+0.8974	0.5782	0.1574	+76	+16
ϵ Aquarii	5.4	1.53	12.2	11 56.1	8 27.9	+ 4 53.3	-1.1414	0.5768	0.1597	-40	-90
42 Aquarii	5.5	1.55	11.8	13 12.5	11 6.5	+ 7 26.1	+0.5717	0.5747	0.1629	+68	- 4
45 Aquarii	6.1	+1.57	+11.6	-13 41.0	12 3.4	+ 8 21.0	+1.2084	0.5740	+0.1639	+77	+42

514 ELEMENTS OF OCCULTATIONS, 1924.

DECEMBER

THE STAR'S				AT CONJUNCTION IN R.A.						Limiting Parallels.	
Name.	Mag.	Reductions from 1924.0		Apparent Declina- tion.	Greenwich Mean Time.	Hour Angle, H	Y	Z	Y'	N.	S.
		$\Delta\alpha$	$\Delta\delta$								
σ Aquarii	4.9	+1.61	+12.3	-11 3.8	29 17 7.8	-10 45.5	-0.6040	0.5700	+0.1693	0	-78
58 Aquarii	6.4	1.62	12.2	11 17.5	17 34.9	-10 19.3	-0.2954	0.5696	0.1698	+17	-54
70 Aquarii	6.1	1.70	12.1	10 57.2	30 1 1.3	-3 8.4	+0.6504	0.5640	0.1767	+76	0
h Aquarii	5.4	1.79	12.7	8 6.0	8 32.2	+4 7.0	-0.9249	0.5586	0.1825	-19	-90
χ Aquarii	5.3	1.83	12.4	8 8.3	13 53.5	+9 17.5	+0.0987	0.5550	0.1860	+41	-30
27 Piscium	5.1	+2.07	+12.6	-3 58.4	31 9 34.9	+4 20.2	-0.4752	0.5433	+0.1942	+10	-66
29 Piscium	5.1	2.10	12.8	3 26.8	11 5.6	+5 47.9	-0.7334	0.5425	0.1945	-4	-90
4 Ceti	6.3	2.13	12.8	2 58.1	13 56.7	+8 33.6	-0.6810	0.5411	0.1950	-1	-86
5 Ceti	6.3	2.14	12.8	2 52.0	14 10.3	+8 46.8	-0.7432	0.5410	0.1951	-5	-90
54 B. Ceti	6.3	+2.22	+12.2	-2 38.2	22 6.8	-7 31.7	+0.5669	0.5374	+0.1960	+74	-5

OCCULTATIONS VISIBLE AT GREENWICH.

. The Angles are reckoned from the North Point and Vertex of the Moon's limb towards the East.

Date.	Star's Name.	Mag.	Disappearance.				Reappearance.			
			Sidereal Time.	Mean Time.	Angle from		Sidereal Time.	Mean Time.	Angle from	
					N. Point.	Vertex.			N. Point.	Vertex.
			h m	h m	°	°	h m	h m	°	°
Jan. 1	B.D. — 11° 3814	7.0					14 0	19 17	337	345
2	190 B. Libræ	6.5					11 8	16 22	329	4
8	29 Capricorni	5.5	0 42	5 34	106	76	1 33	6 25	217	183
9	e Aquarii	5.4	1 9	5 57	56	29	2 14	7 2	261	227
10	h Aquarii	5.4	3 4	7 48	113	79	3 49	8 33	203	166
10	W.Z.C. 1541	7.5	3 28	8 11	156	121				
17	264 B. Tauri	4.8	0 10	4 27	0	39	0 27	4 44	331	10
17	85 Tauri	6.0	0 23	4 40	117	156	1 15	5 32	212	248
17	275 B. Tauri	6.5	1 41	5 58	30	63	2 36	6 53	297	323
17	α Tauri (Aldeb.)	1.1	3 20	7 36	17	35	4 3	8 19	314	322
18	115 Tauri	5.3	3 40	7 52	36	61	4 38	8 50	305	317
19	W.B. VI. 186	6.7	1 38	5 47	86	127				
23	W.Z.C. 662	6.7					4 31	8 23	304	343
27	l Virginis	4.8	10 33	14 9	202	230	10 37	14 13	209	236
30	W.Z.C. 1056	6.7					12 23	15 47	277	309
Feb. 11	μ Ceti	4.4	6 14	8 51	115	80	7 7	9 44	213	175
12	Lalande 6357	6.7	2 50	5 24	113	120				
12	f Tauri	4.3	5 33	8 7	139	112	6 8	8 42	190	159
13	48 Tauri	6.3	3 1	5 31	70	87	4 23	6 53	259	256
13	γ Tauri	3.9	5 47	8 17	73	51	7 7	9 37	266	233
13	70 Tauri	6.4	9 30	11 59	44	4	10 18	12 47	305	265
13	71 Tauri	4.6	9 50	12 19	130	90	10 32	13 1	218	179
13	θ ¹ Tauri	4.2	10 54	13 23	56	17	11 44	14 13	294	258
13	θ ² Tauri	3.6	10 52	13 21	78	39				
15	Lalande 11713	6.6	11 56	14 16	97	57				
16	74 B. Geminorum	6.2	2 41	4 59	101	141	3 50	6 8	252	287
17	f Geminorum	5.3	2 32	4 46	40	81	3 12	5 26	322	2
17	5 Cancri	5.9	14 44	16 57	151	114	15 18	17 30	230	194
19	18 Leonis	5.8	13 35	15 40	101	64	14 36	16 41	297	258
19	19 Leonis	6.4	14 15	16 20	132	93	15 10	17 14	264	224
19	R. Leonis	var.	14 37	16 42	170	131	15 6	17 11	229	190
20	49 Leonis	5.7	10 39	12 40	104	102	11 52	13 53	302	285
28	39 G. Sagittarii	6.3	15 26	16 55	129	153	16 26	17 55	244	260
29	190 B. Sagittarii	5.4					15 17	16 42	311	342
Mar. 6	W.Z.C. 1604	6.8	5 15	6 18	50	12				
11	179 B. Tauri	5.9	10 35	11 18	41	3	11 16	11 59	307	271
16	B.D. +16° 1704	7.0	10 46	11 9	99	68				
17	B.D. +13° 2074	6.7	14 0	14 18	137	98				
21	k Virginis	5.7	15 18	15 21	179	155	15 45	15 48	225	198
21	46 Virginis	6.1	15 22	15 25	49	25	15 52	15 55	356	327

OCCULTATIONS VISIBLE AT GREENWICH.

* * * The Angles are reckoned from the North Point and Vertex of the Moon's limb towards the East.

Date.	Star's Name.	Mag.	Disappearance.				Reappearance.			
			Sidereal Time.	Mean Time.	Angle from		Sidereal Time.	Mean Time.	Angle from	
					N. Point.	Vertex.			N. Point.	Vertex.
			h m	h m	°	°	h m	h m	°	°
Mar. 21	48 Virginis	6.5	17 22	17 24†	19	344	17 24	17 26	15	340
22	W.Z.C. 885	7.0					13 0	12 59	259	268
22	598 B. Virginis	6.1	14 12	14 11	113	109	15 23	15 22	294	278
23	B.D.—11° 3814	7.0					14 14	14 9	304	310
24	190 B. Libræ	6.5					11 15	11 7	301	336
26	W.Z.C. 1153	6.8					15 39	15 22	292	312
Apr. 8	275 B. Tauri	6.5	8 29	7 22	78	39	9 37	8 30	270	230
8	α Tauri (Aldeb.)	1.1	9 54	8 47	41	1	10 40	9 33	308	269
9	115 Tauri	5.3	10 55	9 44	50	9	11 42	10 30	309	270
10	19 B. Geminorum	6.2	8 51	7 36	44	9	9 41	8 26	321	282
10	W.B. VI. 186	6.7	10 6	8 51	135	95				
13	54 Cancri	6.3	10 32	9 5	48	24	11 11	9 44	345	315
14	18 Leonis	5.8	12 30	10 59	151	119	13 22	11 51	249	213
14	W.Z.C. 662	6.7	14 46	13 14	48	9				
15	49 Leonis	5.7	9 48	8 13	138	148	10 56	9 21	266	261
17	W.Z.C. 811	7.1	16 18	14 35	113	79				
18	72 Virginis	6.1	16 52	15 4	182	152	17 11	15 23	217	185
18	l Virginis	4.8	17 4	15 16	95	63	18 3	16 15	305	269
21	W.Z.C. 1056	6.7					13 26	11 27	345	10
29	27 Piscium	5.1					18 48	16 17	268	305
May 9	f Geminorum	5.3	10 26	7 17	166	131	10 57	7 48	216	178
15	46 Virginis	6.1	15 42	12 8	82	54	16 37	13 4	323	290
15	48 Virginis	6.5	17 27	13 53	72	36	18 13	14 39	328	290
16	W.Z.C. 885	7.0	12 35	8 57	150	163				
16	598 B. Virginis	6.1	14 42	11 4	112	103	15 52	12 14	294	274
17	B.D.—11° 3814	7.0	12 57	9 16	84	102				
19	29 Ophiuchi	6.4	16 26	12 36	89	94	17 35	13 46	291	284
21	195 B. Sagittarii	6.3	17 2	13 4	23	42	17 32	13 34	335	350
June 11	γ Virginis	2.9	18 6	12 46	61	23				
12	W.Z.C. 857	7.2	15 15	9 52	165	146				
12	l Virginis	4.8	16 54	11 30	165	134	17 32	12 8	237	203
18	f Sagittarii	5.1	19 26	13 38	139	142	20 5	14 17	204	200
20	44 Capricorni	6.0	18 19	12 23	60	89	19 26	13 30	273	294
22	B.D.—7° 6012	7.0					18 25	12 21	323	0
22	Lalande 46034	6.5					21 14	15 10	288	310
24	26 Ceti	6.0					19 8	12 56	182	221
29	α Tauri (Aldeb.)	1.1	9 50	3 20	76	35	10 50	4 20	274	235
July 4	α ¹ Cancri	5.1	14 24	7 34	97	57	15 20	8 30	293	254
10	W.Z.C. 897	6.6	17 18	10 4	166	136				
12	49 Libræ	5.4	17 10	9 48	157	145	17 54	10 32	233	214

† A graze; occultation doubtful.

OCCULTATIONS, 1924.

517

OCCULTATIONS VISIBLE AT GREENWICH.

*** The Angles are reckoned from the North Point and Vertex of the Moon's limb towards the East.

Date.	Star's Name.	Mag.	Disappearance.				Reappearance.			
			Sidereal Time.	Mean Time.	Angle from		Sidereal Time.	Mean Time.	Angle from	
					N. Point.	Vertex.			N. Point.	Vertex.
			h m	h m	°	°	h m	h m	°	°
July 13	29 Ophiuchi	6.4	16 53	9 27	101	102	18. 4	10 38	279	268
14	16 Sagittarii	5.9	21 50	14 20	121	90				
17	W.Z.C. 1422	6.9					21 17	13 35	187	187
20	W.Z.C. 1595	7.9					18 42	10 48	239	277
23	ξ ² Ceti	4.3	23 38	15 32	100	130	0 42	16 36	212	233
Aug. 6	88 Virginis	6.5	16 11	7 11	58	34	16 51	7 51	346	317
8	190 B. Libræ	6.5	19 15	10 7	38	7	19 44	10 36	344	311
9	W.Z.C. 1069	6.7	17 40	8 28	170	159				
11	W.Z.C. 1237	7.1	20 36	11 15	83	65				
11	29 Sagittarii	5.3	21 30	12 9	100	75	22 32	13 11	249	218
12	f Sagittarii	5.1	18 55	9 31	136	143	19 40	10 16	211	211
12	57 Sagittarii	6.0	22 22	12 57	5	342	22 39	13 14	334	309
14	44 Capricorni	6.0	17 55	8 23	27	58	18 37	9 5	308	335
14	45 Capricorni	5.8	18 9	8 37	121	151	18 58	9 26	213	238
14	μ Capricorni	5.2	23 53	14 20	4	344	0 22	14 49	315	292
17	54 B. Ceti	6.3	19 10	9 26	98	136	20 6	10 22	220	255
19	W.Z.C. 118	7.1					19 40	9 48	222	260
22	71 Tauri	6.4					21 38	11 34	243	281
22	θ ² Tauri	3.6	21 52	11 48	62	101	22 49	12 45	269	309
22	θ ¹ Tauri	4.2	21 57	11 53	38	77	22 44	12 40	292	332
22	81 Tauri	5.5	23 2	12 58	149	189	23 18	13 14	178	218
22	264 B. Tauri	4.8	23 24	13 20	346	26	23 28	13 24	339	19
22	85 Tauri	6.0	23 28	13 24	116	156	0 17	14 13	211	250
22	275 B. Tauri	6.5	0 41	14 37	31	69	1 35	15 30	296	330
22	α Tauri (Aldeb.)	1.1	2 12	16 7	22	52	3. 1	16 56	305	327
24	19 B. Geminorum	6.2	0 43	14 31	80	121	1 48	15 36	263	304
26	VENUS	-4.1	10 36	0 18	170	132	11 0	0 42	207	168
Sept. 1	γ Virginis	2.9	17 19	6 36	129	92	18 15	7 32	271	233
1	B.A.C. 4277	6.1	18 13	7 30	119	81				
6	W.Z.C. 1121	6.6	17 47	6 44	88	83				
7	21 Sagittarii	5.0	20 22	9 15	142	123	21 2	9 55	213	189
9	57 Sagittarii	6.0	21 11	9 56	67	59	22 22	11 7	266	247
9	W.Z.C. 1361	6.7	22 45	11 30†	352	331				
10	W.Z.C. 1422	6.9	17 57	6 39	129	157				
12	χ Aquarii	5.3	23 2	11 35	70	72	0 17	12 50	241	230
16	ξ ² Ceti	4.3					20 34	8 52	248	287
17	8 B. Tauri	6.2	0 4	12 17	56	91	1 16	13 29	261	287
17	Lalande 6357	6.7					3 13	15 25	219	221
17	f Tauri	4.3	4 46	16 59	137	118	5 22	17 35	190	165
18	179 B. Tauri	5.9	21 54	10 4	355	34	22 6	10 16	333	13

† A graze; occultation doubtful.

OCCULTATIONS VISIBLE AT GREENWICH.

* * The Angles are reckoned from the North Point and Vertex of the Moon's limb towards the East.

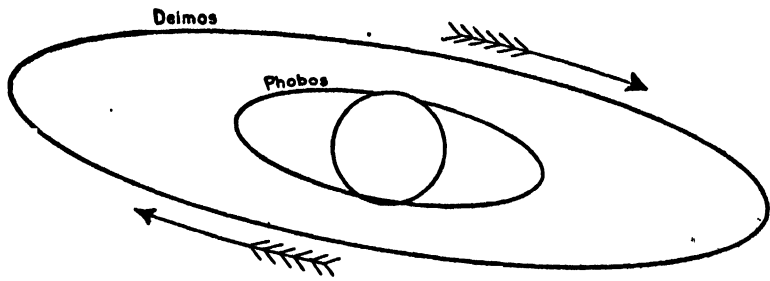
Date.	Star's Name.	Mag.	Disappearance.				Reappearance.			
			Sidereal Time.	Mean Time.	Angle from		Sidereal Time.	Mean Time.	Angle from	
					N. Point.	Vertex.			N. Point.	Vertex.
Sept. 18	48 Tauri	6.3	h m	h m	°	°	h m	h m	°	°
18	γ Tauri	3.9	1 51	14 0	98	128	3 3	15 12	225	242
19	318 B. Tauri	5.7	4 41	16 50	116	110	5 44	17 53	214	193
23	d ¹ Cancri	5.9	21 59	10 5	46	83	22 47	10 53	289	329
24	VENUS	-3.8	1 25	13 15	45	82	2 3	13 53	321	0
							2 53	14 38	299	338
Oct. 6	W.Z.C. 1335	7.0	21 15	8 14	13	1				
7	B.D. -17° 6193	7.0	23 1	9 55	111	93				
9	W.Z.C. 1524	6.7	20 21	7 8	136	160				
9	W.Z.C. 1535	6.8	1 11	11 58	47	25				
11	W.Z.C. 36	6.9	23 40	10 19	31	41				
11	W.Z.C. 39	7.0	4 14	14 52	55	22				
12	117 G. Piscium	6.5	23 29	10 4	92	114	0. 35	11 10	215	225
13	B.D. +7° 362	7.0					3 24	13 55	257	242
14	B.D. +10° 401	6.8					22 49	9 16	206	243
14	B.D. +11° 445	6.8					5 35	16 2	218	189
16	α Tauri (Aldeb.)	1.1	21 17	7 37	42	78	22 2	8 22	291	330
17	115 Tauri	5.3	22 5	8 21	111	147	22 52	9 8	228	267
17	W.Z.C. 373	6.6					23 58	10 13	303	344
17	B.D. +18° 873	7.0					1 14	11 30	245	285
17	120 Tauri	5.6	1 21	11 36	42	82	2 19	12 34	293	330
20	ζ Cancri	4.7	5 26	15 29	103	137	6 46	16 49	270	291
20	B.D. +18° 1882	6.7					8 2	18 4	294	296
21	o ² Cancri	5.7	2 58	12 57	151	191	3 33	13 32	221	261
22	W.Z.C. 663	6.7					5 2	14 57	333	12
22	ν Leonis	5.0	8 24	18 18	94	115				
Nov. 1	128 B. Sagittarii	6.3					19 38	4 55	203	194
2	f Sagittarii	5.1					19 50	5 3	307	306
4	45 Capricorni	5.8	20 23	5 28	50	63	21 35	6 40	272	273
5	MARS	-0.1	23 2	8 3	352	348	23 22	8 23	323	315
5	26 Ceti	6.0	19 36	4 26	76	114	20 38	5 28	240	276
8	W.Z.C. 64	6.7	22 19	7 8	37	65				
8	33 Ceti	6.1	0 30	9 19	1	8	1 7	9 56	305	305
8	W.Z.C. 71	6.8	1 19	10 8	57	55				
10	μ Ceti	4.4	23 20	8 1	45	79	0 28	9 9	267	294
11	f Tauri	4.3	22 2	6 39	114	154	22 48	7 25	206	245
12	γ Tauri	3.9	22 16	6 50	125	165	22 54	7 27	202	242
12	75 Tauri	5.2	3 14	11 47	98	116	4 29	13 2	229	227
14	71 Orionis	5.1	7 39	16 3	141	118	8 30	16 54	219	187
16	g Geminorum	5.0	1 39	9 56	103	143	2 40	10 57	257	298
18	W.Z.C. 639	7.1					3 13	11 22	210	249

OCCULTATIONS VISIBLE AT GREENWICH.

* * The Angles are reckoned from the North Point and Vortex of the Moon's limb towards the East.

Date.	Star's Name.	Mag.	Disappearance.				Reappearance.			
			Sidereal Time.	Mean Time.	Angle from		Sidereal Time.	Mean Time.	Angle from	
					N. Point.	Vertex.			N. Point.	Vertex.
			h m	h m	°	°	h m	h m	°	°
Nov. 21	10 Virginis	6.2	10 18	18 14	145	165	11 23	19 19	268	277
24	B.D. - 11° 38 14	7.0					10 22	18 7	230	265
30	0 Capricorni	5.6	22 29	5 52	37	18	23 22	6 45	294	268
Dec. 4	W.Z.C. 7	6.8	1 59	9 5	69	49				
4	B.D. - 3° 20	6.7	4 20	11 26	103	68				
5	26 Ceti	6.0	5 8	12 10	125	90	5 43	12 45	192	155
7	ξ ² Ceti	4.3	22 13	5 8	89	126	23 16	6 11	223	256
9	179 B. Tauri	5.9	0 37	7 24	112	149	1 32	8 19	209	240
11	W.Z.C. 388	7.5					23 10	5 49	349	28
11	W.Z.C. 389	6.7					23 31	6 10	329	9
11	B.D. + 18° 950	6.9					0 46	7 25	224	265
12	W.Z.C. 458	6.9					0 32	7 7	276	316
13	9 Geminorum	5.0	12 10	18 39	147	106	12 54	19 23	235	194
15	227 B. Cancri	6.4	9 16	15 38	36	36	9 42	16 4	359	352
20	80 Virginis	5.6	13 46	19 48	49	46				
27	W.Z.C. 1326	7.8	23 1	4 38	82	55				
28	21 Capricorni	6.5					23 11	4 44	273	252
28	θ Capricorni	4.2	0 37	6 9	70	39				
29	ι Aquarii	4.4	1 39	7 7	118	87	2 20	7 48	201	167

South



North

APPARENT ORBITS OF THE SATELLITES OF MARS AT DATE OF OPPOSITION,
AUGUST 23, 1924, AS SEEN IN AN INVERTING TELESCOPE.

Date.	PHOBOS.		Date.	DEIMOS.	
	Position Angle of Apsls.	Apparent Distance at Apsls.		Position Angle of Apsls.	Apparent Distance at Apsls.
Aug. 3	75°6'	32.6"	Aug. 3	76°3'	81.5"
Aug. 23	78.2	34.7	Aug. 23	78.7	86.8
Sept. 12	81.0	32.1	Sept. 12	81.3	80.2

GREENWICH MEAN TIME OF GREATEST ELONGATION.

PHOBOS.						DEIMOS.					
d h			d h			d h			d h		
July	17	22.4 E.	Aug.	11	11.7 E.	Sept.	5	1.0 E.	July	13	1.0 E.
	19	1.2 W.		12	14.5 W.		6	3.7 W.		14	22.5 W.
	20	4.0 E.		13	17.3 E.		7	6.5 E.		16	20.0 E.
	21	6.8 W.		14	20.1 W.		8	9.3 W.		18	17.4 W.
	22	9.6 E.		15	22.9 E.		9	12.1 E.		20	14.9 E.
	23	12.4 W.		17	1.6 W.		10	14.9 W.		22	12.3 W.
	24	15.2 E.		18	4.4 E.		11	17.7 E.		24	9.8 E.
	25	18.0 W.		19	7.2 W.		12	20.4 W.		26	7.2 W.
	26	20.7 E.		20	10.0 E.		13	23.2 E.		28	4.7 E.
	27	23.5 W.		21	12.8 W.		15	2.0 W.		30	2.1 W.
Aug.	29	2.3 E.	Sept.	22	15.6 E.	Oct.	16	4.8 E.	Aug.	31	23.5 E.
	30	5.1 W.		23	18.3 W.		17	7.6 W.		2	21.0 W.
	31	7.9 E.		24	21.1 E.		18	10.4 E.		4	18.4 E.
	1	10.7 W.		25	23.9 W.		19	13.2 W.		6	15.8 W.
	2	13.5 E.		27	2.7 E.		20	16.0 E.		8	13.2 E.
	3	16.2 W.		28	5.5 W.		21	18.7 W.		10	10.6 W.
	4	19.0 E.		29	8.3 E.		22	21.5 E.		12	8.0 E.
	5	21.8 W.		30	11.0 W.		24	0.3 W.		14	5.5 W.
	7	0.6 E.		31	13.8 E.		25	3.1 E.		16	2.9 E.
	8	3.4 W.		1	16.6 W.		26	5.9 W.		18	0.3 W.
Sept.	9	6.2 E.	Oct.	2	19.4 E.	Nov.	27	8.7 E.	Aug.	19	21.7 E.
	10	9.0 W.		3	22.2 W.		28	11.5 W.		21	19.1 W.

For Phobos every seventh eastern and western elongation is given, and for Deimos every third; the intermediate ones may be found by adding multiples of the period of the satellite.
Sidereal period of Phobos, 7^h 39^m 13^s.85. Sidereal period of Deimos, 30^h 17^m 54^s.87.

SATELLITES OF JUPITER, 1924. 521

MEAN SYNODIC PERIODS OF THE SATELLITES.

$$V. \text{ } 0^{\text{d}} 11^{\text{h}} 57^{\text{m}} 27^{\text{s}}.6 = 0^{\text{d}}.498236$$

$$\begin{array}{l} \text{I. } \begin{array}{c} \text{d h m s} \\ 1 \ 18 \ 28 \ 35.94619 \end{array} = \begin{array}{c} \text{d} \\ 1.7698604883 \end{array} \\ \text{II. } \begin{array}{c} \text{d h m s} \\ 3 \ 13 \ 17 \ 53.73665 \end{array} = \begin{array}{c} \text{d} \\ 3.5540941742 \end{array} \end{array}$$

$$\begin{array}{l} \text{III. } \begin{array}{c} \text{d h m s} \\ 7 \ 3 \ 59 \ 35.85660 \end{array} = \begin{array}{c} \text{d} \\ 7.1663872292 \end{array} \\ \text{IV. } \begin{array}{c} \text{d h m s} \\ 16 \ 18 \ 5 \ 6.91878 \end{array} = \begin{array}{c} \text{d} \\ 16.7535523007 \end{array} \end{array}$$

MEAN TIME OF EVERY TWENTIETH GREATEST ELONGATION.

SATELLITE V.

Mar.	d h	E.	June	d h	E.	Mar.	d h	W.	June	d h	W.
	12 15.6	E.		10 7.5	E.		12 21.6	W.		10 13.4	W.
	22 14.7	E.		20 6.6	E.		22 20.7	W.		20 12.5	W.
Apr.	1 13.8	E.		30 5.7	E.	• Apr.	1 19.8	W.		30 11.6	W.
	11 12.9	E.	July	10 4.8	E.		11 18.9	W.	July	10 10.8	W.
	21 12.0	E.		20 3.9	E.		21 18.0	W.		20 9.9	W.
May	1 11.1	E.		30 3.0	E.	May	1 17.1	W.		30 9.0	W.
	11 10.2	E.	Aug.	9 2.1	E.		11 16.2	W.	Aug.	9 8.1	W.
	21 9.3	E.		19 1.3	E.		21 15.3	W.		19 7.3	W.
	31 8.4	E.		29 0.4	E.		31 14.4	W.		29 6.4	W.

MEAN TIME OF SUPERIOR GEOCENTRIC CONJUNCTION.

SATELLITE I. (Io).

Jan.	d h m	Feb.	d h m	Mar.	d h m	Apr.	d h m
	1 15 10.1		9 14 4.2		19 12 34.9		27 10 34.5
	3 9 40.2		11 8 33.5		21 7 2.9		29 5 1.0
	5 4 10.2		13 3 2.7		23 1 30.8		30 23 27.4
	6 22 40.3		14 21 31.9		24 19 58.7	May	2 17 53.9
	8 17 10.3		16 16 1.0		26 14 26.4		4 12 20.2
	10 11 40.3		18 10 30.1		28 8 54.1		6 6 46.6
	12 6 10.2		20 4 59.0		30 3 21.6		8 1 12.8
	14 0 40.2		21 23 28.0		31 21 49.2		9 19 39.0
	15 19 10.0		23 17 56.8	Apr.	2 16 16.6		11 14 5.2
	17 13 39.9		25 12 25.7		4 10 44.1		13 8 31.3
	19 8 9.6		27 6 54.4		6 5 11.4		15 2 57.4
	21 2 39.5		29 1 23.2		7 23 38.8		16 21 23.5
	22 21 9.1	Mar.	1 19 51.8		9 18 5.9		18 15 49.5
	24 15 38.9		3 14 20.4		11 12 33.1		20 10 15.6
	26 10 8.5		5 8 48.9		13 7 0.1		22 4 41.5
	28 4 38.2		7 3 17.4		15 1 27.2		23 23 7.5
	29 23 7.7		8 21 45.8		16 19 54.1		25 17 33.4
	31 17 37.3		10 16 14.2		18 14 21.0		27 11 59.4
Feb.	2 12 6.7		12 10 42.4		20 8 47.8		29 6 25.3
	4 6 36.2		14 5 10.7		22 3 14.6		31 0 51.2
	6 1 5.5		15 23 38.8		23 21 41.3	June	1 19 17.1
	7 19 34.9		17 18 6.9		25 16 7.9		3 13 43.0

522 SATELLITES OF JUPITER, 1924.

MEAN TIME OF SUPERIOR GEOCENTRIC CONJUNCTION.

SATELLITE I. (Io)—*continued.*

June	d	h	m	July	d	h	m	Sept.	d	h	m	Oct.	d	h	m
	5	8	8.9		21	7	33.6		5	7	40.0		21	8	25.6
	7	2	34.8		23	2	0.6		7	2	8.8		23	2	55.5
	8	21	0.7		24	20	27.8		8	20	37.7		24	21	25.6
	10	15	26.7		26	14	55.0		10	15	6.6		26	15	55.6
	12	9	52.6		28	9	22.3		12	9	35.6		28	10	25.7
	14	4	18.6		30	3	49.7		14	4	4.6		30	4	55.8
	15	22	44.6		31	22	17.1		15	22	33.7		31	23	26.0
	17	17	10.6	Aug.	2	16	44.6		17	17	2.8	Nov.	2	17	56.1
	19	11	36.7		4	11	12.1		19	11	32.1		4	12	26.3
	21	6	2.7		6	5	39.7		21	6	1.3		6	6	56.5
	23	0	28.9		8	0	7.4		23	0	30.7		8	1	26.8
	24	18	55.0		9	18	35.2		24	19	0.0		9	19	57.0
	26	13	21.2		11	13	3.0		26	13	29.5		11	14	27.3
	28	7	47.4		13	7	31.0		28	7	58.9		13	8	57.5
	30	2	13.7		15	1	58.9		30	2	28.5		15	3	27.9
July	1	20	40.0		16	20	27.0	Oct.	1	20	58.0		16	21	58.2
	3	15	6.4		18	14	55.1		3	15	27.6		18	16	28.6
	5	9	32.9		20	9	23.3		5	9	57.2		20	10	58.9
	7	3	59.4		22	3	51.6		7	4	26.9		22	5	29.3
	8	22	26.0		23	22	19.9		8	22	56.6		23	23	59.6
	10	16	52.6		25	16	48.3		10	17	26.3		25	18	30.1
	12	11	19.3		27	11	16.8		12	11	56.1		27	13	0.4
	14	5	46.0		29	5	45.3		14	6	25.9		29	7	30.9
	16	0	12.8		31	0	13.9		16	0	55.8	Dec.	1	2	1.3
	17	18	39.7	Sept.	1	18	42.5		17	19	25.7				
	19	13	6.6		3	13	11.2		19	13	55.6				

SATELLITE II. (EUROPA).

Jan.	d	h	m	Feb.	d	h	m	Apr.	d	h	m	June	d	h	m
	0	19	28.5		23	3	46.8		16	10	39.1		8	15	53.3
	4	8	51.4		26	17	5.5		19	23	50.4		12	5	1.5
	7	22	14.1	Mar.	1	6	23.8		23	13	1.6		15	18	9.0
	11	11	36.7		4	19	41.7		27	2	11.8		19	7	17.6
	15	0	59.0		8	8	59.1		30	15	22.2		22	20	25.5
	18	14	21.1		11	22	16.1	May	4	4	31.5		26	9	34.7
	22	3	42.9		15	11	32.6		7	17	41.1		29	22	43.3
	25	17	4.5		19	0	48.7		11	6	49.7	July	3	11	53.2
	29	6	25.9		22	14	4.2		14	19	58.6		7	1	2.6
Feb.	1	19	47.0		26	3	19.4		18	9	6.6		10	14	13.4
	5	9	7.8		29	16	33.8		21	22	15.0		14	3	23.8
	8	22	28.3	Apr.	2	5	48.0		25	11	22.5		17	16	35.6
	12	11	48.5		5	19	1.4		29	0	30.6		21	5	47.1
	16	1	8.3		9	8	14.6	June	1	13	37.9		24	19	0.0
	19	14	27.7		12	21	26.9		5	2	46.0		28	8	12.6

SATELLITES OF JUPITER, 1924. 523

MEAN TIME OF SUPERIOR GEOCENTRIC CONJUNCTION.

SATELLITE II. (EUROPA)—*continued.*

	d	h	m		d	h	m		d	h	m		d	h	m
July	31	21	26.7	Sept.	1	20	54.4	Oct.	3	21	2.1	Nov.	4	21	34.3
Aug.	4	10	40.5		5	10	13.9		7	10	24.4		8	10	59.0
	7	23	55.8		8	23	33.1		10	23	47.7		12	0	23.5
	11	13	10.6		12	12	53.6		14	13	10.6		15	13	48.3
	15	2	27.0		16	2	13.6		18	2	34.3		19	3	13.0
	18	15	43.0		19	15	34.9		21	15	57.7		22	16	38.0
	22	5	0.5		23	4	55.8		25	5	21.8		26	6	2.9
	25	18	17.7		26	18	17.8		28	18	45.6		29	19	28.0
	29	7	36.2		30	7	39.4	Nov.	1	8	10.1				

SATELLITE III. (GANYMEDE).

	d	h	m		d	h	m		d	h	m		d	h	m
Jan.	0	22	52.8	Mar.	27	0	46.4	June	20	18	1.4	Sept.	14	14	14.4
	8	3	17.3	Apr.	3	4	32.3		27	21	20.8		21	18	22.1
	15	7	39.6		10	8	13.1	July	5	0	43.0		28	22	33.1
	22	11	59.7		17	11	49.9		12	4	9.0	Oct.	6	2	47.0
	29	16	17.5		24	15	21.9		19	7	38.6		13	7	3.6
Feb.	5	20	32.8	May	1	18	49.6		26	11	13.0		20	11	23.3
	13	0	45.8		8	22	13.5	Aug.	2	14	51.3		27	15	45.0
	20	4	55.4		16	1	34.4		9	18	34.0	Nov.	3	20	8.7
	27	9	2.0		23	4	53.6		16	22	21.2		11	0	33.9
Mar.	5	13	4.3		30	8	10.6		24	2	12.8		18	5	0.3
	12	17	2.6	June	6	11	27.4		31	6	9.4		25	9	27.9
	19	20	56.7		13	14	43.9	Sept.	7	10	9.8				

SATELLITE IV. (CALLISTO).

	d	h	m		d	h	m		d	h	m		d	h	m
Jan.	14	5	36.2	Apr.	7	2	5.0	June	29	4	13.7	Sept.	20	15	57.3
	31	1	27.3		23	18	1.5	July	15	19	12.6	Oct.	7	11	10.6
Feb.	16	20	45.7	May	10	9	7.1	Aug.	1	11	1.1		24	6	58.2
Mar.	4	15	22.9		26	23	35.4		18	3	46.6	Nov.	10	3	11.7
	21	9	11.5	June	12	13	48.6	Sept.	3	21	26.9		26	23	44.2

524 SATELLITES OF JUPITER, 1924.

JANUARY.

MEAN TIME.

Day.		h m	Day.		h m	Day.		h m	Day.		h m
0	I. Sh. c.	16 10	7	II. Em.	23 25	15	I. Em.	20 16	23	II. Sh. c.	19 33
	I. Tr. c.	16 48								II. Tr. c.	21 30
	II. E. c.	17 1·8	8	III. E. f.	1 14·6	16	I. Sh. c.	14 25		II. Sh. f.	21 53
	I. Sh. f.	18 20		III. Im.	2 11		I. Tr. c.	15 16		II. Tr. f.	23 51
	I. Tr. f.	18 58		III. Em.	4 24		I. Sh. f.	16 35			
	III. E. c.	19 12·8		I. E. c.	15 18·5		II. Sh. c.	16 57	24	I. E. c.	13 34·6
	II. Em.	20 39		I. Em.	18 16		I. Tr. f.	17 26		I. Em.	16 45
	III. E. f.	21 15·3					II. Tr. c.	18 43			
	III. Im.	21 47	9	I. Sh. c.	12 32		II. Sh. f.	19 17	25	I. Sh. c.	10 47
	III. Em.	23 59		I. Tr. c.	13 18		II. Tr. f.	21 5		I. Tr. c.	11 44
1	I. E. c.	13 24·6		II. Sh. c.	14 21					I. Sh. f.	12 56
	I. Em.	16 16		I. Sh. f.	14 41	17	I. E. c.	11 41·0		I. Tr. f.	13 54
				I. Tr. f.	15 28		I. Em.	14 45		II. E. c.	13 57·5
2	I. Sh. c.	10 39		II. Tr. c.	15 55					II. Em.	18 15
	I. Tr. c.	11 18		II. Sh. f.	16 41	18	I. Sh. c.	8 54		III. Sh. c.	20 57
	II. Sh. c.	11 45		II. Tr. f.	18 17		I. Tr. c.	9 46		III. Sh. f.	23 1
	I. Sh. f.	12 48	10	I. E. c.	9 47·1		I. Sh. f.	11 3	26	III. Tr. c.	0 52
	II. Tr. c.	13 6		I. Em.	12 46		II. E. c.	11 24·5		III. Tr. f.	3 5
	I. Tr. f.	13 28					I. Tr. f.	11 56		I. E. c.	8 3·0
	II. Sh. f.	14 5	11	I. Sh. c.	7 0		II. Em.	15 32		I. Em.	11 14
	II. Tr. f.	15 28		I. Tr. c.	7 47		III. Sh. c.	16 59			
3	I. E. c.	7 53·2		II. E. c.	8 51·4		III. Sh. f.	19 3	27	I. Sh. c.	5 15
	I. Em.	10 46		I. Sh. f.	9 10		III. Tr. c.	20 33		I. Tr. c.	6 14
				I. Tr. f.	9 57		III. Tr. f.	22 46		I. Sh. f.	7 24
4	I. Sh. c.	5 7		II. Em.	12 47	19	I. E. c.	6 9·3		I. Tr. f.	8 24
	I. Tr. c.	5 48		III. Sh. c.	13 1		I. Em.	9 15		II. Sh. c.	8 51
	II. E. c.	6 18·3		III. Sh. f.	15 4	20	I. Sh. c.	3 22		II. Tr. c.	10 52
	I. Sh. f.	7 16		III. Tr. c.	16 12		I. Tr. c.	4 16		II. Sh. f.	11 11
	I. Tr. f.	7 58		III. Tr. f.	18 24		I. Sh. f.	5 31		II. Tr. f.	13 14
	III. Sh. c.	9 4	12	I. E. c.	4 15·5		II. Sh. c.	6 15	28	I. E. c.	2 31·5
	II. Em.	10 2		I. Em.	7 16		I. Tr. f.	6 26		I. Em.	5 44
	III. Sh. f.	11 6					II. Tr. c.	8 6		I. Sh. c.	23 43
	III. Tr. c.	11 49	13	I. Sh. c.	1 29		II. Sh. f.	8 35	29		
	III. Tr. f.	14 1		I. Tr. c.	2 17		II. Tr. f.	10 28		I. Tr. c.	0 43
				I. Sh. f.	3 38					I. Sh. f.	1 53
5	I. E. c.	2 21·6		II. Sh. c.	3 38	21	I. E. c.	0 37·8		I. Tr. f.	2 53
	I. Em.	5 16		I. Tr. f.	4 27		I. Em.	3 45		II. E. c.	3 14·0
	I. Sh. c.	23 35		II. Tr. c.	5 19		I. Sh. c.	21 50		II. Em.	7 37
				II. Sh. f.	5 59		I. Tr. c.	22 45		III. E. c.	11 3·7
6	I. Tr. c.	0 18		II. Tr. f.	7 41					III. E. f.	13 10·1
	II. Sh. c.	1 2		I. E. c.	22 44·0					III. Im.	15 10
	I. Sh. f.	1 45	14	I. Em.	1 46		I. Sh. f.	0 0	22	III. Em.	17 25
	I. Tr. f.	2 28		I. Sh. c.	19 57		II. E. c.	0 41·0		I. E. c.	20 59·8
	II. Tr. c.	2 30		I. Tr. c.	20 47		I. Tr. f.	0 55			
	II. Sh. f.	3 22		I. Sh. f.	22 6		II. Em.	4 54	30	I. Em.	0 13
	II. Tr. f.	4 52		II. E. c.	22 7·9		III. E. c.	7 6·4		I. Sh. c.	18 12
	I. E. c.	20 50·1		I. Tr. f.	22 57		III. E. f.	9 11·8		I. Tr. c.	19 13
	I. Em.	23 46					III. Im.	10 53		I. Sh. f.	20 21
7	I. Sh. c.	18 4	15	II. Em.	2 10		III. Em.	13 7		I. Tr. f.	21 22
	I. Tr. c.	18 48		III. E. c.	3 8·9		I. E. c.	19 6·2		II. Sh. c.	22 9
	II. E. c.	19 34·9		III. E. f.	5 13·3	23	I. Em.	22 15			
	I. Sh. f.	20 13		III. Im.	6 33		I. Sh. c.	16 19	31	II. Tr. c.	0 15
	I. Tr. f.	20 58		III. Em.	8 46		I. Tr. c.	17 15		II. Sh. f.	0 29
	III. E. c.	23 11·1		I. E. c.	17 12·4		I. Sh. f.	18 28		II. Tr. f.	2 36
							I. Tr. f.	19 25		I. E. c.	15 28·3
										I. Em.	18 43

Eclipse commences - - - E. c.

,, finishes - - - E. f.

Occultation, immersion - - Im.

,, emersion - - Em.

Transit commences - - - Tr. c.

,, finishes - - - Tr. f.

Shadow commences - - Sh. c.

,, finishes - - - Sh. f.

SATELLITES OF JUPITER, 1924. 525

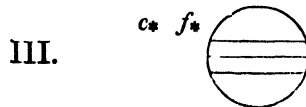
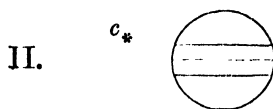
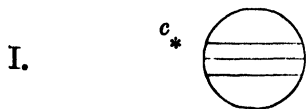
JANUARY.

MEAN TIME.

Configurations at 18^h 45^m for an inverting Telescope.

Day.	West.	East.
1		○ ·1 2·3 4·
2		1·2· ○ 3· 4·
3		·2 ○ ·1 3· 4·
4		·1 3· ○ ·2 4·
5	3·	4· ○ 1· ₂
6	·3 4·2· ·1	○
7	4·	·3 ·2 ₁ ○
8	4·	○ ·3·2 ● ·1
9	4·	1· ₂ ○ ·3
10	·4 ·2	○ ·1 3·
11	·4 1·	○ ·2
12	·4 ₃	○ 1·2·
13	·3 2· ·4 ₁	○
14		·3 ·2 ○ 1· ·4
15	· ● 1	○ ·3 ·2 ·4
16		1· ○ ·3 ·4 2○
17		·2 ○ ·1 3· ·4
18		1· 3○ ·2 4·
19	3·	○ 1· 2· 4·
20	·3 2· ·1	○ 4·
21		·3 ·2 ○ 1· 4·
22		4· ○ ¹ ·3 ·2
23	1· ○	4· ○ 2· ·3
24	4·	2· ○ ·1 3·
25	4·	1· ○ ² ₃
26	4·	3· ○ ·1 2·
27	·4 3·	·1 ₂ ○
28	·4 ·3 ·2	○ 1·
29	·4 ·1	○ ³ ·2
30		·4 ₁ ○ 2· ·3
31	2·	○ ·4 3· ● ·1

Phases of the Eclipses of the Satellites for an inverting Telescope.



526 SATELLITES OF JUPITER, 1924.

FEBRUARY.

MEAN TIME.

Day.		h m	Day.		h m	Day.		h m	Day.		h m
1	I. Sh. c.	12 40	8	I. Tr. f.	17 49	16	II. Em.	2 19	23	II. Im.	2 36
	I. Tr. c.	13 42		II. E. c.	19 37		III. Sh. c.	8 48		II. Em.	4 58
	I. Sh. f.	14 49		II. Em.	23 39		III. Sh. f.	10 55		III. Sh. c.	12 45
	I. Tr. f.	15 52					III. Tr. c.	13 31		III. Sh. f.	14 53
	II. E. c.	16 30.6					I. E. c.	13 43.8		I. E. c.	15 37.3
	II. Em.	20 58	9	III. Sh. c.	4 52		III. Tr. f.	15 45		III. Tr. c.	17 39
				III. Sh. f.	6 58		I. Em.	17 7		I. Em.	19 2
				III. Tr. c.	9 21					III. Tr. f.	19 53
				III. Tr. f.	11 35						
2	III. Sh. c.	0 55		I. E. c.	11 50.3	17	I. Sh. c.	10 54			
	III. Sh. f.	3 0		I. Em.	15 10		I. Tr. c.	12 4	24	I. Sh. c.	12 48
	III. Tr. c.	5 8					I. Sh. f.	13 4		I. Tr. c.	14 0
	III. Tr. f.	7 21					I. Tr. f.	14 14		I. Sh. f.	14 57
	I. E. c.	9 56.7					II. Sh. c.	16 37		I. Tr. f.	16 9
	I. Em.	13 12	10	I. Sh. c.	9 1		II. Sh. f.	18 58		II. Sh. c.	19 13
				I. Tr. c.	10 8		II. Tr. d.	19 1		II. Sh. f.	21 33
				I. Sh. f.	11 11		II. Tr. f.	21 22		II. Tr. c.	21 41
				I. Tr. f.	12 18						
3	I. Sh. c.	7 8		II. Sh. c.	14 2						
	I. Tr. c.	8 11		II. Tr. c.	16 20	18	I. E. c.	8 12.2			
	I. Sh. f.	9 18		II. Sh. f.	16 22		I. Em.	11 36	25	II. Tr. f.	0 2
	I. Tr. f.	10 21		II. Tr. f.	18 41					I. E. c.	10 5.7
	II. Sh. c.	11 26								I. Em.	13 31
	II. Tr. c.	13 37									
	II. Sh. f.	13 46	11	I. E. c.	6 18.7	19	I. Sh. c.	5 23			
	II. Tr. f.	15 58		I. Em.	9 39		I. Tr. c.	6 33			
							I. Sh. f.	7 32	26	I. Sh. c.	7 16
							I. Tr. f.	8 43		I. Tr. c.	8 29
4	I. E. c.	4 25.1	12	I. Sh. c.	3 30		II. E. c.	10 53.4		I. Sh. f.	9 25
	I. Em.	7 42		I. Tr. c.	4 37		II. E. f.	13 14.3		I. Tr. f.	10 38
				I. Sh. f.	5 39		II. Im.	13 17		II. E. c.	13 26.7
				I. Tr. f.	6 47		II. Em.	15 39		II. E. f.	15 47.8
5	I. Sh. c.	1 37		II. E. c.	8 20.3		III. E. c.	22 56.1		II. Im.	15 55
	I. Tr. c.	2 41		II. Em.	12 59					II. Em.	18 17
	I. Sh. f.	3 46		III. E. c.	18 58.7	20	III. E. f.	1 5.5			
	I. Tr. f.	4 50		III. E. f.	21 7.1		I. E. c.	2 40.5	27	III. E. c.	2 54.0
	II. E. c.	5 47.2		III. Im.	23 38		III. Im.	3 47		I. E. c.	4 34.0
	II. Em.	10 19					III. Em.	6 3		III. E. f.	5 4.4
	III. E. c.	15 0.9					I. Em.	6 5		III. Im.	7 54
	III. E. f.	17 8.3					I. Sh. c.	23 51		I. Em.	8 0
	III. Im.	19 25	13	I. E. c.	0 47.0	21	I. Tr. c.	1 2		III. Em.	10 10
	III. Em.	21 40		III. Em.	1 54		I. Sh. f.	2 0	28	I. Sh. c.	1 44
	I. E. c.	22 53.5		I. Em.	4 8		I. Tr. f.	3 12		I. Tr. c.	2 57
				I. Sh. c.	21 58		II. Sh. c.	5 55		I. Sh. f.	3 53
				I. Tr. c.	23 6		II. Sh. f.	8 16		I. Tr. f.	5 7
6	I. Em.	2 11	14	I. Sh. f.	0 7		II. Tr. c.	8 22		II. Sh. c.	8 31
	I. Sh. c.	20 5		I. Tr. f.	1 16		I. E. c.	21 8.9		II. Sh. f.	10 51
	I. Tr. c.	21 10		II. Sh. c.	3 20					II. Tr. c.	11 1
	I. Sh. f.	22 14		II. Sh. f.	5 40	22	I. Em.	0 34		II. Tr. f.	13 21
	I. Tr. f.	23 20		II. Tr. c.	5 41		I. Sh. c.	18 19		I. E. c.	23 2.4
				II. Tr. f.	8 2		I. Tr. c.	19 31	29	I. Em.	2 29
7	II. Sh. c.	0 45		I. E. c.	19 15.4		I. Sh. f.	20 29		I. Sh. c.	20 12
	II. Tr. c.	2 59		I. Em.	22 38		I. Tr. f.	21 41		I. Tr. c.	21 26
	II. Sh. f.	3 5								I. Sh. f.	22 22
	II. Tr. f.	5 20								I. Tr. f.	23 35
	I. E. c.	17 21.9	15	I. Sh. c.	16 26	23	II. E. c.	0 10.0			
	I. Em.	20 41		I. Tr. c.	17 35		II. E. f.	2 31.0			
				I. Sh. f.	18 35						
				I. Tr. f.	19 45						
8	I. Sh. c.	14 33		II. E. c.	21 36.8						
	I. Tr. c.	15 39									
	I. Sh. f.	16 42									

Eclipse commences - - - E. c.
 „ finishes - - - E. f.

Occultation, immersion - - Im.
 „ emersion - - Em.

Transit commences - - - Tr. c.
 „ finishes - - - Tr. f.

Shadow commences - - - Sh. c.
 „ finishes - - - Sh. f.

SATELLITES OF JUPITER, 1924. 527

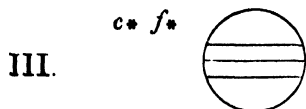
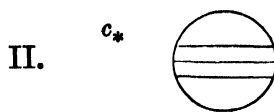
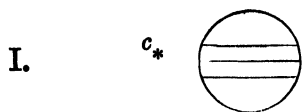
FEBRUARY.

MEAN TIME.

Configurations at 17^h 30^m for an inverting Telescope.

Day.	West.	East.
1	• ● 2	1' ○ 3' 4'
2		3' ○ 1' 2' 4'
3	3' 1' 2' ○	4'
4	3' 2' ○	1' 4'
5	1' ○ 3' 2'	4'
6		○ 1' 2' 3' 4'
7	• ● 1	2' ○ 4' 3'
8	1. ○	2' ○ 3'
9	4' 3' ○ 1' 2'	
10	2. ○ 4' 3' 1' ○	
11	4' 3' 2' ○ 1'	
12	4' 1' 3' ○ 2'	
13	4' ○ 1' 2..3	
14	4' 2' 1' ○	3'
15	4' 2' 1. ○	3'
16		3. ○ 4' 1' 2'
17	3' 1' 2. ○	4'
18	3' 2' ○ 1'	4'
19	1. 3' ○ 2'	4'
20		○ 1' 2. 3' 4'
21	2. 1' ○	3' 4'
22	2' ○ 1' 3' 4'	
23	• ● 1	3' ○ 2' 4'
24	3' 1' ○ 2. 4'	
25	3' 2' 4' ○ 1'	
26	4' 3' 1' ○	
27	4' ○	3' 1' 2'
28	4' 1. 2' ○	3'
29	4' 2' ○ 1' 3'	

Phases of the Eclipses of the Satellites for an inverting Telescope.



528 SATELLITES OF JUPITER, 1924.

MARCH.

MEAN TIME.

Day.		h m	Day.		h m	Day.		h m	Day.		h m
1	II. E. c.	2 43.3	8	III. Sh. c.	20 40	16	III. Tr. f.	7 55	24	II. Sh. c.	5 32
	II. E. f.	5 4.6		III. Sh. f.	22 50		I. Sh. c.	18 27		II. Sh. f.	7 53
	II. Im.	5 13		I. Em.	22 51		I. Tr. c.	19 41		II. Tr. c.	8 1
	II. Em.	7 35					I. Sh. f.	20 36		II. Tr. f.	10 21
	III. Sh. c.	16 42	9	III. Tr. c.	1 43		I. Tr. f.	21 51		I. E. c.	17 39.2
	I. E. c.	17 30.7		III. Tr. f.	3 58					I. Em.	21 4
	III. Sh. f.	28 51		I. Sh. c.	16 34	17	II. Sh. c.	2 58	25	I. Sh. c.	14 48
	I. Em.	20 57		I. Tr. c.	17 48		II. Sh. f.	5 18		I. Tr. c.	16 0
	III. Tr. c.	21 42		I. Sh. f.	18 43		II. Tr. c.	5 29		I. Sh. f.	16 58
	III. Tr. f.	23 57		I. Tr. f.	19 58		I. E. c.	15 45.8		I. Tr. f.	18 10
2	I. Sh. c.	14 41	10	II. Sh. c.	0 23		I. Em.	19 12		II. E. c.	23 41.1
	I. Tr. c.	15 54		II. Sh. f.	2 43	18	I. Sh. c.	12 55	26	II. E. f.	2 3.2
	I. Sh. f.	16 50		II. Tr. c.	2 55		I. Tr. c.	14 9		II. Im.	2 8
	I. Tr. f.	18 4		II. Tr. f.	5 16		I. Sh. f.	15 4		II. Em.	4 31
	II. Sh. c.	21 48		I. E. c.	13 52.5		I. Tr. f.	16 19		I. E. c.	12 7.4
3	II. Sh. f.	0 8		I. Em.	17 20		II. E. c.	21 7.3		I. Em.	15 32
	II. Tr. c.	0 19	11	I. Sh. c.	11 2		II. E. f.	23 29.1		III. E. c.	18 42.6
	II. Tr. f.	2 40		I. Tr. c.	12 16		II. Im.	23 38		III. E. f.	20 57.2
	I. E. c.	11 59.1		I. Sh. f.	13 11					III. Im.	23 38
	I. Em.	15 26		I. Tr. f.	14 26	19	II. Em.	2 0	27	III. Em.	1 55
4	I. Sh. c.	9 9		II. E. c.	18 33.6		I. E. c.	10 14.1		I. Sh. c.	9 16
	I. Tr. c.	10 23		II. E. f.	20 55.2		I. Em.	13 40		I. Tr. c.	10 28
	I. Sh. f.	11 18		II. Im.	21 5		III. E. c.	14 45.5		I. Sh. f.	11 26
	I. Tr. f.	12 33		II. Em.	23 27		III. E. f.	16 59.1		I. Tr. f.	12 38
	II. E. c.	16 0.1	12	I. E. c.	8 20.7		III. Im.	19 48		II. Sh. c.	18 50
	II. E. f.	18 21.5		III. E. c.	10 48.5		III. Em.	22 5		II. Sh. f.	21 11
	II. Im.	18 31		I. Em.	11 48	20	I. Sh. c.	7 23		II. Tr. c.	21 16
	II. Em.	20 53		III. E. f.	13 1.0		I. Tr. c.	8 37		II. Tr. f.	23 36
5	I. E. c.	6 27.4		III. Im.	15 54		I. Sh. f.	9 33	28	I. E. c.	6 35.8
	III. E. c.	6 51.3		III. Em.	18 11		I. Tr. f.	10 47		I. Em.	10 0
	III. E. f.	9 2.8	13	I. Sh. c.	5 30		II. Sh. c.	16 16	29	I. Sh. c.	3 45
	I. Em.	9 55		I. Tr. c.	6 45		II. Sh. f.	18 36		I. Tr. c.	4 56
	III. Im.	11 56		I. Sh. f.	7 40		II. Tr. c.	18 46		I. Sh. f.	5 54
	III. Em.	14 13		I. Tr. f.	8 54		II. Tr. f.	21 6		I. Tr. f.	7 6
6	I. Sh. c.	3 37		II. Sh. c.	13 41	21	I. E. c.	4 42.5		II. E. c.	12 58.0
	I. Tr. c.	4 51		II. Sh. f.	16 1		I. Em.	8 8		II. E. f.	15 20.3
	I. Sh. f.	5 46		II. Tr. c.	16 13	22	I. Sh. c.	1 51		II. Im.	15 23
	I. Tr. f.	7 1		II. Tr. f.	18 33		I. Tr. c.	3 5		II. Em.	17 45
	II. Sh. c.	11 6	14	I. E. c.	2 49.1		I. Sh. f.	4 1	30	I. E. c.	1 4.1
	II. Sh. f.	13 26		I. Em.	6 16		I. Tr. f.	5 14		I. Em.	4 27
	II. Tr. c.	13 38		I. Sh. c.	23 58		II. E. c.	10 24.1		III. Sh. c.	8 32
	II. Tr. f.	15 58					II. E. f.	12 46.1		III. Sh. f.	10 45
7	I. E. c.	0 55.7	15	I. Tr. c.	1 13		II. Im.	12 53		III. Tr. c.	13 20
	I. Em.	4 23		I. Sh. f.	2 8		II. Em.	15 15		III. Tr. f.	15 34
	I. Sh. c.	22 5		I. Tr. f.	3 22		I. E. c.	23 10.8		I. Sh. c.	22 13
	I. Tr. c.	23 20		II. E. c.	7 50.4		I. Em.	2 36		I. Tr. c.	23 23
8	I. Sh. f.	0 15		II. E. f.	10 12.1	23	III. Sh. c.	4 35	31	I. Sh. f.	0 23
	I. Tr. f.	1 29		II. Im.	10 22		III. Sh. f.	6 47		I. Tr. f.	1 33
	II. E. c.	5 16.8		II. Em.	12 43		III. Tr. c.	9 32		II. Sh. c.	8 7
	II. E. f.	7 38.3		I. E. c.	21 17.4		III. Tr. f.	11 47		II. Sh. f.	10 28
	II. Im.	7 48	16	III. Sh. c.	0 37		I. Sh. c.	20 20		II. Tr. c.	10 30
	II. Em.	10 10		I. Em.	0 44		I. Tr. c.	21 33		II. Tr. f.	12 50
	I. E. c.	19 24.1		III. Sh. f.	2 48		I. Sh. f.	22 29		I. E. c.	19 32.5
				III. Tr. c.	5 40		I. Tr. f.	23 42		I. Em.	22 55

Eclipse commences - - - E. c.

„ finishes - - - E. f.

Occultation, immersion - - Im.

„ emersion - - Em.

Transit commences - - - Tr. c.

„ finishes - - - Tr. f.

Shadow commences - - - Sh. c.

„ finishes - - - Sh. f.

SATELLITES OF JUPITER, 1924. 529

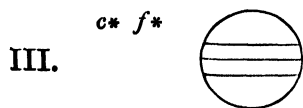
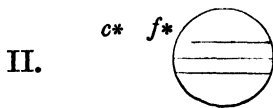
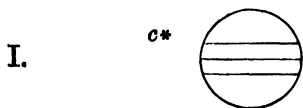
MARCH.

MEAN TIME.

Configurations at 16^h 15^m for an inverting Telescope.

Day.	West.			East.		
1	4		1	3	2	
2	4	3			2	1
3		3	4		1	
4	2		3	1		
5				3	1	4
6			1		3	4
7		2		1	3	4
8			1		3	4
9			3	1	2	4
10		3	2			4
11			3		4	
12	3			4	1	2
13			1		3	2
14		4	2		1	3
15		4		1	2	3
16		4		3	1	2
17	1	4	3	2		
18	1	4	3	2		
19	3		4		1	2
20			4		2	3
21		2		4	1	3
22			1		2	3
23			3		1	2
24		3	2		1	
25		3	2			4
26			3		1	2
27			1		2	3
28			2		1	4
29	2		1		4	3
30			4		1	2
31		4	3		1	2

Phases of the Eclipses of the Satellites for an inverting Telescope.



530 SATELLITES OF JUPITER, 1924.

APRIL.

MEAN TIME.

Day.		h m	Day.		h m	Day.		h m	Day.		h m
1	I. Sh. c.	16 41	9	II. E. c.	4 49.4	17	III. E. c.	6 35.6	24	I. Sh. c.	16 49
	I. Tr. c.	17 51		II. Em.	9 25		III. E. f.	8 53.5		I. Tr. c.	17 43
	I. Sh. f.	18 51		I. E. c.	15 54.1		III. Im.	10 42		I. Sh. f.	19 0
	I. Tr. f.	20 1		I. Em.	19 11		III. Em.	12 58		I. Tr. f.	19 53
							I. Sh. c.	14 56			
2	II. E. c.	2 15.0	10	III. E. c.	2 37.6		I. Tr. c.	15 56	25	II. Sh. c.	5 7
	II. Em.	6 59		III. E. f.	4 54.4		I. Sh. f.	17 6		II. Tr. c.	6 54
	I. E. c.	14 0.8		III. Im.	7 5		I. Tr. f.	18 6		II. Sh. f.	7 29
	I. Em.	17 22		III. Em.	9 21					II. Tr. f.	9 14
	III. E. c.	22 40.3		I. Sh. c.	13 3	18	II. Sh. c.	2 33		I. E. c.	14 9.3
				I. Tr. c.	14 7		II. Tr. c.	4 33		I. Em.	17 13
				I. Sh. f.	15 13		II. Sh. f.	4 55			
3	III. E. f.	0 56.0		I. Tr. f.	16 18		II. Tr. f.	6 53			
	III. Im.	3 24		II. Sh. c.	23 59		I. E. c.	12 15.9			
	III. Em.	5 41					I. Em.	15 26			
	I. Sh. c.	11 9									
	I. Tr. c.	12 18	11	II. Tr. c.	2 10	19	I. Sh. c.	9 24	26	I. Sh. c.	11 17
	I. Sh. f.	13 19		II. Sh. f.	2 20		I. Tr. c.	10 22		I. Tr. c.	12 9
	I. Tr. f.	14 28		II. Tr. f.	4 30		I. Sh. f.	11 35		I. Sh. f.	13 28
	II. Sh. c.	21 24		I. E. c.	10 22.5		I. Tr. f.	12 33		I. Tr. f.	14 20
	II. Tr. c.	23 44		I. Em.	13 39		II. E. c.	20 41.0		II. E. c.	23 15.7
	II. Sh. f.	23 46									
4	II. Tr. f.	2 4	12	I. Sh. c.	7 31	20	II. Em.	1 0	27	II. Em.	3 22
	I. E. c.	8 29.1		I. Tr. c.	8 35		I. E. c.	6 44.2		I. E. c.	8 37.6
	I. Em.	11 50		I. Sh. f.	9 41		I. Em.	9 53		I. Em.	11 40
				I. Tr. f.	10 45		III. Sh. c.	20 23			
				II. E. c.	18 6.5		III. Sh. f.	22 40			
				II. Em.	22 37						
5	I. Sh. c.	5 38									
	I. Tr. c.	6 46									
	I. Sh. f.	7 48									
	I. Tr. f.	8 56									
	II. E. c.	15 32.2	13	I. E. c.	4 50.8	21	III. Tr. c.	0 16	28	III. Sh. c.	0 21
	II. Em.	20 12		I. Em.	8 6		III. Tr. f.	2 30		III. Sh. f.	2 39
				III. Sh. c.	16 25		I. Sh. c.	3 52		III. Tr. c.	3 46
				III. Sh. f.	18 41		I. Tr. c.	4 49		I. Sh. c.	5 46
				III. Tr. c.	20 41		I. Sh. f.	6 3		III. Tr. f.	6 0
				III. Tr. f.	22 55		I. Tr. f.	7 0		I. Tr. c.	6 36
6	I. E. c.	2 57.5					II. Sh. c.	15 50		I. Sh. f.	7 57
	I. Em.	6 17					II. Tr. c.	17 44		I. Tr. f.	8 46
	III. Sh. c.	12 28	14	I. Sh. c.	1 59		II. Sh. f.	18 12		II. Sh. c.	18 24
	III. Sh. f.	14 43		I. Tr. c.	3 2		II. Tr. f.	20 4		II. Tr. c.	20 4
	III. Tr. c.	17 3		I. Sh. f.	4 9					II. Sh. f.	20 46
	III. Tr. f.	19 17		I. Tr. f.	5 12	22	I. E. c.	1 12.6		II. Tr. f.	22 24
				II. Sh. c.	13 16		I. Em.	4 20			
				II. Tr. c.	15 21		I. Sh. c.	22 21			
				II. Sh. f.	15 37		I. Tr. c.	23 16			
				II. Tr. f.	17 41						
				I. E. c.	23 19.2						
7	I. Sh. c.	0 6									
	I. Tr. c.	1 13									
	I. Sh. f.	2 16									
	I. Tr. f.	3 23									
	II. Sh. c.	10 41									
	II. Tr. c.	12 57	15	I. Em.	2 33	23	I. Sh. f.	0 31	29	I. E. c.	3 6.1
	II. Sh. f.	13 3		I. Sh. c.	20 27		I. Tr. f.	1 26		I. Em.	6 6
	II. Tr. f.	15 17		I. Tr. c.	21 29		II. E. c.	9 58.5			
	I. E. c.	21 25.8		I. Sh. f.	22 38		II. Em.	14 12			
				I. Tr. f.	23 39		I. E. c.	19 40.9	30	I. Sh. c.	0 14
							I. Em.	22 47		I. Tr. c.	1 3
8	I. Em.	0 44								I. Sh. f.	2 25
	I. Sh. c.	18 34	16	II. E. c.	7 23.9	24	III. E. c.	10 33.1		I. Tr. f.	3 13
	I. Tr. c.	19 40		II. Em.	11 49		III. E. f.	12 52.2		II. E. c.	12 33.4
	I. Sh. f.	20 44		I. E. c.	17 47.5		III. Im.	14 14		II. Em.	16 33
	I. Tr. f.	21 50		I. Em.	21 0		III. Em.	16 30		I. E. c.	21 34.4

Eclipse commences - - - E. c.

,, finishes - - - E. f.

Occultation, immersion - - Im.

,, emersion - - Em.

Transit commences - - - Tr. c.

,, finishes - - - Tr. f.

Shadow commences - - - Sh. c.

,, finishes - - - Sh. f.

SATELLITES OF JUPITER, 1924. 531

APRIL.

MEAN TIME.

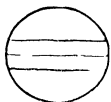
Configurations at 14^h 45^m for an inverting Telescope.

Day.	<i>West.</i>					<i>East.</i>				
1		4'	·3	·2	○	1'				
2	·● 1	4'		·3	○	·2				
3		·4			○	³ ₂				
4		·4		2'	○	·1		·3		
5			·4	1' ·2	○			3'		
6					·4 3	○ ·1 ·2				
7	2. ○			3' ·1	○	·4				
8			·3	·2	○	1'		·4		
9				·3 ·1	○	·2		·4		
10					○	·3 2'		·4	1 ○	
11				2'	○	·1		·3	·4	
12				² ₁	○			3'	·4	
13					○	3' ·1 ·2		·4		
14				3' ·1	² ₂ ○	·4				
15			3'	·2	·4 ○	1'				
16				·4 ·3	·1 ○	2				
17		·4			1 ○ ³ ₃	2'				
18		·4		2'	○	·3			·● 1	
19		·4		·2 1'	○	3'				
20		·4			○	¹ ₃ ·2				
21		·4		¹ ₃	○ 2'					
22			3'	⁴ ₂	○	1'				
23				·3 ·1	○	⁴ ₂				
24	·● 3				○	1' ² ₂ ·4				
25	·● 1			2'	○	·3 ·4				
26				·2	○	3'		·4		
27					○	·1 ² ₃		·4		
28				¹ ₃	○ 2'			·4		
29			3' 2'		○	·1		·4		
30	·● 2		·3	·1	○	·4				

Phases of the Eclipses of the Satellites for an inverting Telescope.

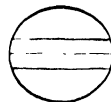
I.

C*



II.

C*



III.

C* f*



IV.

No Eclipse

of this Satellite.



532 SATELLITES OF JUPITER, 1924.

MAY.

MEAN TIME.

Day.		h m	Day.		h m	Day.		h m	Day.		h m
1	I. Em.	0 33	8	I. Sh. f.	22 47	16	I. E. c.	19 50.0	25	II. E. c.	9 37.5
	III. E. c.	14 30.4		III. Em.	23 21		I. Em.	22 29		II. Em.	12 33
	III. E. f.	16 50.6		I. Tr. f.	23 25					I. E. c.	16 12.1
	III. Im.	17 42				17	I. Sh. c.	16 58		I. Em.	18 39
	I. Sh. c.	18 43	9	II. Sh. c.	10 15		I. Tr. c.	17 25			
	I. Tr. c.	19 29		II. Tr. c.	11 31		I. Sh. f.	19 10			
	III. Em.	19 57		II. Sh. f.	12 38		I. Tr. f.	19 36	26	I. Sh. c.	13 21
	I. Sh. f.	20 54		II. Tr. f.	13 51					I. Tr. c.	13 36
	I. Tr. f.	21 40		I. E. c.	17 56.3					I. Sh. f.	15 33
				I. Em.	20 44	18	II. E. c.	7 1.6		I. Tr. f.	15 47
2	II. Sh. c.	7 41					II. Em.	10 17		III. Sh. c.	16 11
	II. Tr. c.	9 13	10	I. Sh. c.	15 5		I. E. c.	14 18.4		III. Tr. c.	17 14
	II. Sh. f.	10 3		I. Tr. c.	15 41		I. Em.	16 55		III. Sh. f.	18 35
	II. Tr. f.	11 33		I. Sh. f.	17 16	19	I. Sh. c.	11 27		III. Tr. f.	19 28
	I. E. c.	16 2.8		I. Tr. f.	17 51		I. Tr. c.	11 52			
	I. Em.	18 59					III. Sh. c.	12 14	27	II. Sh. c.	4 40
3	I. Sh. c.	13 11	11	II. E. c.	4 26.0		I. Sh. f.	13 38		II. Tr. c.	5 8
	I. Tr. c.	13 55		II. Em.	8 0		III. Tr. c.	13 56		II. Sh. f.	7 4
	I. Sh. f.	15 22		I. E. c.	12 24.7		I. Tr. f.	14 2		II. Tr. f.	7 29
	I. Tr. f.	16 6		I. Em.	15 11		III. Sh. f.	14 36		I. E. c.	10 40.6
							III. Tr. f.	16 10		I. Em.	13 5
4	II. E. c.	1 50.8	12	III. Sh. c.	8 16	20	II. Sh. c.	2 6			
	II. Em.	5 42		I. Sh. c.	9 33		II. Tr. c.	2 54	28	I. Sh. c.	7 49
	I. E. c.	10 31.1		I. Tr. c.	10 7		II. Sh. f.	4 29		I. Tr. c.	8 2
	I. Em.	13 26		III. Tr. c.	10 36		II. Tr. f.	5 15		I. Sh. f.	10 1
5	III. Sh. c.	4 18		III. Sh. f.	10 37		I. E. c.	8 46.8		I. Tr. f.	10 13
	III. Sh. f.	6 38		I. Sh. f.	11 44		I. Em.	11 21		II. E. c.	22 55.8
	III. Tr. c.	7 13		I. Tr. f.	12 18	21	I. Sh. c.	5 55			
	I. Sh. c.	7 39		III. Tr. f.	12 50		I. Tr. c.	6 18	29	II. Em.	1 42
	I. Tr. c.	8 22		II. Sh. c.	23 33		I. Sh. f.	8 7		I. E. c.	5 9.0
	III. Tr. f.	9 27	13	II. Tr. c.	0 39		I. Tr. f.	8 29		I. Em.	7 31
	I. Sh. f.	9 51		II. Sh. f.	1 55		II. E. c.	20 19.8			
	I. Tr. f.	10 33		II. Tr. f.	2 59		II. Em.	23 26	30	I. Sh. c.	2 18
	II. Sh. c.	20 58		I. E. c.	6 53.1					I. Tr. c.	2 28
	II. Tr. c.	22 22		I. Em.	9 37					I. Sh. f.	4 30
	II. Sh. f.	23 21								I. Tr. f.	4 39
6	II. Tr. f.	0 42	14	I. Sh. c.	4 1	22	I. E. c.	3 15.2		III. E. c.	6 21.5
	I. E. c.	4 59.6		I. Tr. c.	4 33		I. Em.	5 47		III. Em.	9 18
	I. Em.	7 52		I. Sh. f.	6 13					II. Sh. c.	17 57
				I. Tr. f.	6 44	23	I. Sh. c.	0 24		II. Tr. c.	18 15
				II. E. c.	17 44.0		I. Tr. c.	0 44		II. Sh. f.	20 21
				II. Em.	21 9		III. E. c.	2 23.5		II. Tr. f.	20 36
7	I. Sh. c.	2 8					I. Sh. f.	2 35		I. E. c.	23 37.5
	I. Tr. c.	2 48	15	I. E. c.	1 21.5		I. Tr. f.	2 55			
	I. Sh. f.	4 19		I. Em.	4 3		III. Em.	6 1	31	I. Em.	1 56
	I. Tr. f.	4 59		III. E. c.	22 25.3		II. Sh. c.	15 23		I. Sh. c.	20 47
	II. E. c.	15 8.6		I. Sh. c.	22 30		II. Tr. c.	16 1		I. Tr. c.	20 54
	II. Em.	18 52		I. Tr. c.	22 59		II. Sh. f.	17 47		I. Sh. f.	22 58
	I. E. c.	23 27.9					II. Tr. f.	18 22		I. Tr. f.	23 5
							I. E. c.	21 43.7			
8	I. Em.	2 18	16	I. Sh. f.	0 41	24	I. Em.	0 13			
	III. E. c.	18 27.8		I. Tr. f.	1 10		I. Sh. c.	18 52			
	I. Sh. c.	20 36		III. Em.	2 42		I. Tr. c.	19 10			
	III. E. f.	20 49.1		II. Sh. c.	12 49		I. Sh. f.	21 4			
	III. Im.	21 6		II. Tr. c.	13 47		I. Tr. f.	21 21			
	I. Tr. c.	21 15		II. Sh. f.	15 12						
				II. Tr. f.	16 7						

Eclipse commences - - - E. c.
 „ finishes - - - E. f.

Transit commences - - - Tr. c.
 „ finishes - - - Tr. f.

Occultation, immersion - - Im.
 „ emersion - - Em.

Shadow commences - - Sh. c.
 „ finishes - - - Sh. f.

SATELLITES OF JUPITER, 1924. 533

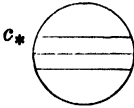
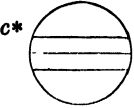
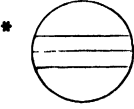

MAY.

MEAN TIME.

Configurations at 13^h 15^m for an inverting Telescope.

Day.	West.	East.
1		.3 ○ ^{1.} _{4.} 2.
2		4. ^{1.} _{2.} ○ .3
3	4. 2.	1 ○ .3
4	4.	○ .2 3. ● .1
5	4.	^{1.} _{3.} ○ 2.
6	.4 3. 2.	○ .1
7	.4 .3 1. 2	○
8	.4 .3	○ 1. 2
9	2. ○	.4 1. ○ .3
10		.2 ○ ^{1.} _{4.} .3
11	● .1	○ .2 3. ^{4.}
12		^{1.} _{3.} ○ 2. 4
13	3. 2.	○ .1 4
14	.3 1. 2	○ 4.
15	.3	○ .1 2 4.
16	.1 2	○ .3 4.
17	.2	○ 1. 4. 3
18		^{1.} _{4.} ○ .2 3.
19	1. ○	4. ^{3.} ○ 2.
20	4. 3. 2.	○ .1
21	4. .3	^{2.} _{1.} ○
22	4.	.3 ○ .1 2
23	.4	.1 ○ 2. 3
24	.4 2.	○ 1. 3
25	.4 .1	^{2.} ○ 3.
26		4. ^{1.} ○ 3. 2.
27	3. 2.	○ ^{1.} 4
28	3. .2 1.	○ 4
29	.3	○ .1 2 4
30	1.	○ ^{3.} _{2.} 4
31	2.	○ 1. 3 4.

Phases of the Eclipses of the Satellites for an inverting Telescope.

I.		II.	
III.		IV.	No Eclipse  of this Satellite.

534 SATELLITES OF JUPITER, 1924.

JUNE.

MEAN TIME.

Day.		h m	Day.		h m	Day.		h m	Day.		h m
1	II. E. c.	12 13.6	9	I. Tr. c.	17 4	17	III. Tr. c.	3 4	24	II. Tr. c.	14 5
	II. Em.	14 49		I. Sh. c.	17 10		III. Sh. c.	4 7		II. Sh. c.	14 57
	I. E. c.	18 5.9		I. Tr. f.	19 15		III. Tr. f.	5 20		II. Tr. f.	16 26
	I. Em.	20 22		I. Sh. f.	19 22		III. Sh. f.	6 33		II. Sh. f.	17 21
				III. Tr. c.	23 46		II. Tr. c.	11 50		I. Im.	17 50
2	I. Sh. c.	15 15	10	III. Sh. c.	0 8		II. Sh. c.	12 23		I. E. f.	20 28.1
	I. Tr. c.	15 20		III. Tr. f.	2 1		II. Tr. f.	14 11			
	I. Sh. f.	17 27		III. Sh. f.	2 33		II. Sh. f.	14 47			
	I. Tr. f.	17 31		II. Tr. c.	9 36		I. Im.	16 5			
	III. Sh. c.	20 9		II. Sh. c.	9 49		I. E. f.	18 33.9	25	I. Tr. c.	14 59
	III. Tr. c.	20 30		II. Tr. f.	11 57	18	I. Tr. c.	13 14		I. Sh. c.	15 27
	III. Sh. f.	22 34		II. Sh. f.	12 12		I. Sh. c.	13 33		I. Tr. f.	17 10
	III. Tr. f.	22 44		I. Im.	14 21		I. Tr. f.	15 25		I. Sh. f.	17 39
				I. E. f.	16 39.8		I. Sh. f.	15 45			
3	II. Sh. c.	7 14	11	I. Tr. c.	11 30	19	II. Im.	6 6	26	II. Im.	8 23
	II. Tr. c.	7 22		I. Sh. c.	11 38		II. E. f.	9 11.1		II. E. f.	11 48.4
	II. Sh. f.	9 38		I. Tr. f.	13 41		I. Im.	10 31		I. Im.	12 16
	II. Tr. f.	9 43		I. Sh. f.	13 50		I. E. f.	13 2.4		I. E. f.	14 56.6
	I. E. c.	12 34.4									
	I. Em.	14 48									
4	I. Sh. c.	9 44	12	II. Im.	3 50	20	I. Tr. c.	7 40			
	I. Tr. c.	9 46		II. E. f.	6 34.0		I. Sh. c.	8 1			
	I. Sh. f.	11 56		I. Im.	8 47		I. Tr. f.	9 52	27	I. Tr. c.	9 25
	I. Tr. f.	11 57		I. E. f.	11 8.3		I. Sh. f.	10 13		I. Sh. c.	9 56
							III. Im.	16 53		I. Tr. f.	11 37
5	II. E. c.	1 32.0	13	I. Tr. c.	5 56		III. E. f.	20 44.4		I. Sh. f.	12 8
	II. E. f.	3 57.2		I. Sh. c.	6 7	21	II. Tr. c.	0 57		III. Im.	20 12
	I. E. c.	7 2.9		I. Tr. f.	8 7		II. Sh. c.	1 40			
	I. E. f.	9 14.3		I. Sh. f.	8 19		II. Tr. f.	3 18			
				III. Im.	13 36		II. Sh. f.	4 4	28	III. E. f.	0 43.8
				III. E. f.	16 45.2		I. Im.	4 57		II. Tr. c.	3 12
6	I. Tr. c.	4 12		II. Tr. c.	22 43		I. E. f.	7 31.0		II. Sh. c.	4 14
	I. Sh. c.	4 12	14	II. Sh. c.	23 6					II. Tr. f.	5 34
	I. Tr. f.	6 23				22	I. Tr. c.	2 6		II. Sh. f.	6 38
	I. Sh. f.	6 24					I. Sh. c.	2 30		I. Im.	6 42
	III. Im.	10 20		II. Tr. f.	1 4		I. Tr. f.	4 18		I. E. f.	9 25.2
	III. E. f.	12 45.9		II. Sh. f.	1 30		I. Sh. f.	4 42			
	II. Tr. c.	20 29		I. Im.	3 13		II. Im.	19 14			
	II. Sh. c.	20 31		I. E. f.	5 36.8		II. E. f.	22 29.3	29	I. Tr. c.	3 52
	II. Tr. f.	22 50	15	I. Tr. c.	0 22		I. Im.	23 23		I. Sh. c.	4 25
	II. Sh. f.	22 55		I. Sh. c.	0 35					I. Tr. f.	6 3
7	I. Im.	1 30		I. Tr. f.	2 33	23	I. E. f.	1 59.5		I. Sh. f.	6 37
	I. E. f.	3 42.8		I. Sh. f.	2 47		I. Tr. c.	20 33		II. Im.	21 32
	I. Tr. c.	22 38		II. Im.	16 58		I. Sh. c.	20 59			
	I. Sh. c.	22 41		II. E. f.	19 52.1		I. Tr. f.	22 44			
				I. Im.	21 39		I. Sh. f.	23 11			
8	I. Tr. f.	0 49	16	I. E. f.	0 5.3	24	III. Tr. c.	6 22	30	II. E. f.	1 6.7
	I. Sh. f.	0 53		I. Tr. c.	18 48		III. Sh. c.	8 6		I. Im.	1 8
	II. Im.	14 42		I. Sh. c.	19 4		III. Tr. f.	8 39		I. E. f.	3 53.8
	II. E. f.	17 15.2		I. Tr. f.	20 59		III. Sh. f.	10 33		I. Tr. c.	22 18
	I. Im.	19 55		I. Sh. f.	21 16					I. Sh. c.	22 54
	I. E. f.	22 11.3									

Eclipse commences - - - E. c.

,, finishes - - - E. f.

Occultation, immersion - - Im.

,, emersion - - Em.

Transit commences - - - Tr. c.

,, finishes - - - Tr. f.

Shadow commences - - Sh. c.

,, finishes - - - Sh. f.

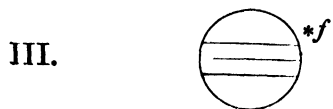
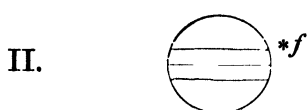
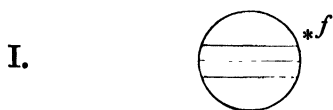
JUNE.

MEAN TIME.

Configurations at 11^h 30^m for an inverting Telescope.

Day.	West.				East.			
1			.1	○ 2	3.	4.		
2				○ 1 ^{2.} 3.	4.			
3		3.	2.	○ 1	4.			
4	1. ○	3.	.2	4. ○				
5		4. 3		○ .1 .2				
6		4.	1.	○ 2.			● .3	
7		4.	2.	○ .1 .3				
8		.4	.1 .2	○ 3.				
9		.4		○ 1. 3. .2				
10	2. ○	.4	3. .1	○				
11		3. 4. 2		○			1 ○.	
12		.3		○ 4 1 .2				
13			1. .	○ 3 2. .4				
14			2.	○ .1 .3 .4				
15			1. .2	○ 3. .4				
16				○ 1. 3 2 .4				
17			.1 3	○ 4. 2 ○.				
18		3. .2		○ 1. 4.				
19	● .1	.3		○ .2 4.				
20			.3 1	○ 4. 2.				
21			2. 4	○ .1 .3				
22		4.	.2 1.	○ .3				
23		4.		○ 1. .2 3.				
24		4.	.1 3.	○ 2.				
25		.4 3. 2.		○ 1.				
26		.4 .3	.1 1	○ 2.				
27	1. ○	.4 .3		○ 2.				
28			4. 2.	○ .1 .3				
29			.2 1.	○ .4 .3				
30				○ .1 .2 3. .4				

Phases of the Eclipses of the Satellites for an inverting Telescope.



536 SATELLITES OF JUPITER, 1924.

JULY.

MEAN TIME.

Day.		h m	Day.		h m	Day.		h m	Day.		h m
1	I. Tr. f.	0 29	8	II. Tr. f.	21 0	16	I. Sh. c.	21 12	24	II. E. f.	22 19.2
	I. Sh. f.	1 6		I. Im.	21 20		I. Tr. f.	22 30		I. E. f.	22 34.5
	III. Tr. c.	9 44		II. Sh. f.	22 30		I. Sh. f.	23 24			
	III. Tr. f.	12 2									
	III. Sh. c.	12 5	9	I. E. f.	0 16.8	17	II. Im.	15 23	25	I. Tr. c.	16 35
	III. Sh. f.	14 34		I. Tr. c.	18 31		I. Im.	17 34		I. Sh. c.	17 36
	II. Tr. c.	16 21		I. Sh. c.	19 17		II. E. f.	19 41.3		I. Tr. f.	18 46
	II. Sh. c.	17 31		I. Tr. f.	20 42		I. E. f.	20 39.9		I. Sh. f.	19 48
	II. Tr. f.	18 42		I. Sh. f.	21 29						
	I. Im.	19 35				18	I. Tr. c.	14 46			
	II. Sh. f.	19 56	10	II. Im.	13 1		I. Sh. c.	15 41	26	III. Im.	10 1
	I. E. f.	22 22.4		I. Im.	15 47		I. Tr. f.	16 57		III. Em.	12 25
				II. E. f.	17 3.5		I. Sh. f.	17 53		II. Tr. c.	12 30
				I. E. f.	18 45.4					I. Im.	13 49
2	I. Tr. c.	16 45	11	I. Tr. c.	12 58	19	III. Im.	6 27		III. E. c.	14 10.0
	I. Sh. c.	17 22		I. Sh. c.	13 46		III. Em.	8 50		II. Sh. c.	14 32
	I. Tr. f.	18 56		I. Tr. f.	15 9		II. Tr. c.	10 8		II. Tr. f.	14 53
	I. Sh. f.	19 34		I. Sh. f.	15 58		III. E. c.	10 10.7		III. E. f.	16 43.8
3	II. Im.	10 41	12	III. Im.	2 58		II. Sh. c.	11 58		II. Sh. f.	16 57
	I. Im.	14 1		III. Em.	5 20		I. Im.	12 1		I. E. f.	17 3.2
	II. E. f.	14 25.9		III. E. c.	6 11.9		II. Tr. f.	12 30			
	I. E. f.	16 51.0		II. Tr. c.	7 48		III. E. f.	12 43.4			
4	I. Tr. c.	11 11		III. E. f.	8 43.5		II. Sh. f.	14 22	27	I. Tr. c.	11 2
	I. Sh. c.	11 51		II. Sh. c.	9 23		I. E. f.	15 8.6		I. Sh. c.	12 5
	I. Tr. f.	13 23		II. Tr. f.	10 10	20	I. Tr. c.	9 13		I. Tr. f.	13 13
	I. Sh. f.	14 3		I. Im.	10 14		I. Sh. c.	10 10		I. Sh. f.	14 17
	III. Im.	23 33		II. Sh. f.	11 47		I. Tr. f.	11 24			
5	III. Em.	1 53		I. E. f.	13 14.0		I. Sh. f.	12 22			
	III. E. c.	2 12.9	13	I. Tr. c.	7 25	21	II. Im.	4 35	28	II. Im.	7 0
	III. E. f.	4 43.3		I. Sh. c.	8 15		I. Im.	6 28		I. Im.	8 17
	II. Tr. c.	5 29		I. Tr. f.	9 36		II. E. f.	8 59.8		I. E. f.	11 31.8
	II. Sh. c.	6 49		I. Sh. f.	10 27		I. E. f.	9 37.3		II. E. f.	11 37.7
	II. Tr. f.	7 51									
	I. Im.	8 27	14	II. Im.	2 12	22	I. Tr. c.	3 40	29	I. Tr. c.	5 30
	II. Sh. f.	9 13		I. Im.	4 40		I. Sh. c.	4 39		I. Sh. c.	6 34
	I. E. f.	11 19.6		II. E. f.	6 21.9		I. Tr. f.	5 51		I. Tr. f.	7 41
6	I. Tr. c.	5 38		I. E. f.	7 42.6		I. Sh. f.	6 51		I. Sh. f.	8 46
	I. Sh. c.	6 20	15	I. Tr. c.	1 52		III. Tr. c.	20 5		III. Tr. c.	23 41
	I. Tr. f.	7 49		I. Sh. c.	2 44		III. Tr. f.	22 27			
	I. Sh. f.	8 32		I. Tr. f.	4 3	23	II. Tr. c.	23 18	30	II. Tr. c.	1 42
	II. Im.	23 51		I. Sh. f.	4 56		III. Sh. c.	0 1		III. Tr. f.	2 5
7	I. Im.	2 54		III. Tr. c.	16 34		I. Im.	0 55		I. Im.	2 44
	II. E. f.	3 44.2		III. Tr. f.	18 55		II. Sh. c.	1 15		II. Sh. c.	3 49
	I. E. f.	5 48.2		III. Sh. c.	20 2		II. Tr. f.	1 41		III. Sh. c.	4 0
8	I. Tr. c.	0 5		III. Sh. f.	20 57		III. Sh. f.	2 33		II. Tr. f.	4 5
	I. Sh. c.	0 49		III. Sh. f.	22 33		II. Sh. c.	3 39		I. E. f.	6 0.5
	I. Tr. f.	2 16		II. Sh. c.	22 40		I. E. f.	4 5.9		II. Sh. f.	6 14
	I. Sh. f.	3 1		I. Im.	23 7		I. Tr. c.	22 7		III. Sh. f.	6 33
	III. Tr. c.	13 7		II. Tr. f.	23 20		I. Sh. c.	23 7		I. Tr. c.	23 57
	III. Tr. f.	15 26	16	II. Sh. f.	1 5	24	I. Tr. f.	0 19	31	I. Sh. c.	1 3
	III. Sh. c.	16 3		I. E. f.	2 11.3		I. Sh. f.	1 19		I. Tr. f.	2 8
	III. Sh. f.	18 33		I. Tr. c.	20 19		II. Im.	17 47		I. Sh. f.	3 15
	II. Tr. c.	18 38					I. Im.	19 22		II. Im.	20 14
	II. Sh. c.	20 6								I. Im.	21 11

Eclipse commences - - - E. c.
 „ finishes - - - E. f.

Transit commences - - - Tr. c.
 „ finishes - - - Tr. f.

Occultation, immersion - - Im.
 „ emersion - - - Em.

Shadow commences - - - Sh. c.
 „ finishes - - - Sh. f.

SATELLITES OF JUPITER, 1924. 537

JULY.

MEAN TIME.

Configurations at 10^h 0^m for an inverting Telescope.

Day.	West.			East.		
1		1 [•]	○ 2 [•]	4 [•]	3 ○ [•]	
2		3 [•] 2 [•]	○ 1 [•]	4 [•]		
3		3 [•]	1 [•] ○ ²	4 [•]		
4		3 [•]	1 ○ [•]	2 [•]	4 [•]	
5			2 [•] ○	3 [•]	4 [•]	● 1
6		2 [•]	1 [•] ○	4 [•]	3 [•]	
7			○	1 [•] 2 [•]	3 [•]	
8		4 [•]	1 [•] ○ 3 [•]	2 [•]		
9		4 [•]	3 [•] 2 [•]	○ 1 [•]		
10		4 [•]	3 [•]	1 [•] 2 [•] ○		
11		4 [•]	3 [•]	○ 1 [•]	2 [•]	
12	2. ○	4 [•]		○ 1 [•]	3 [•]	
13		4 [•]	2 [•]	1 [•] ○	3 [•]	
14		4 [•]		○ 1 [•] 2 [•]	3 [•]	
15			1 [•] 4 [•] ○	3 [•] 2 [•]		
16			3 [•] 2 [•] ○	1 [•] 4 [•]		
17		3 [•]	1 [•] 2 [•] ○	4 [•]		
18		3 [•]	○ 1 [•]	2 [•]	4 [•]	
19			1 [•] 2 [•] ○ ³	4 [•]		
20		2 [•]	○	3 [•]	4 [•]	1 ○ [•]
21			○ 1 [•] 2 [•]	3 [•]	4 [•]	
22			1 [•] ○	3 [•] 2 [•]	4 [•]	
23			2 [•] 3 [•] ○	1 [•] 4 [•]		
24		3 [•]	2 [•] 3 [•] 4 [•] ○			
25		4 [•] 3 [•]	○	1 [•] 2 [•]		
26		4 [•]	1 [•] 2 [•] 3 [•] ○			
27		4 [•]	2 [•]	1 ○ [•]	3 [•]	
28		4 [•]	○	3 [•]		● 1 ● 2
29		4 [•]	1 [•] ○	3 [•] 2 [•]		
30		4 [•]	2 [•] 3 [•] ○	1 [•]		
31		3 [•] 4 [•]	1 [•] 2 [•] ○			

Phases of the Eclipses of the Satellites for an inverting Telescope.

I.



II.



III.



IV.

No Eclipse



of this Satellite.

538 SATELLITES OF JUPITER, 1924.

AUGUST.

MEAN TIME.

Day.		h m	Day.	h m	Day.	h m	Day.	h m
1	I. E. f.	0 29.2	9	I. Im.	17 30	17	II. Sh. f.	0 41
	II. E. f.	0 57.2		II. Sh. c.	19 41		III. E. c.	2 6.5
	I. Tr. c.	18 25		II. Tr. f.	19 45		III. E. f.	4 43.8
	I. Sh. c.	19 32		III. Em.	19 48		I. Tr. c.	16 37
	I. Tr. f.	20 36		I. E. f.	20 52.6		I. Sh. c.	17 51
	I. Sh. f.	21 43		II. Sh. f.	22 6		I. Tr. f.	18 48
				III. E. c.	22 7.7		I. Sh. f.	20 3
2	III. Im.	13 38	10	III. E. f.	0 43.8	18	I. Im.	13 49
	II. Tr. c.	14 55		I. Tr. c.	14 44		II. Im.	14 29
	I. Im.	15 39		I. Sh. c.	15 56		II. Em.	16 57
	III. Em.	16 4		II. Tr. f.	16 55		II. E. c.	17 3.5
	II. Sh. c.	17 7		I. Sh. f.	18 8		I. E. f.	17 16.1
	II. Tr. f.	17 18					II. E. f.	19 32.0
	III. E. c.	18 8.9	11	II. Im.	11 57	19	I. Tr. c.	11 5
	I. E. f.	18 57.9		I. Im.	11 57		I. Sh. c.	12 20
	II. Sh. f.	19 31		II. Em.	14 24		I. Tr. f.	13 16
	III. E. f.	20 43.8		II. E. c.	14 25.7		I. Sh. f.	14 32
				I. E. f.	15 21.3	20	I. Im.	8 18
				II. E. f.	16 53.9		II. Tr. c.	9 5
3	I. Tr. c.	12 53	12	I. Tr. c.	9 12		III. Tr. c.	10 56
	I. Sh. c.	14 0		I. Sh. c.	10 25		II. Tr. f.	11 29
	I. Tr. f.	15 4		I. Tr. f.	11 23		II. Sh. c.	11 33
	I. Sh. f.	16 12		I. Sh. f.	12 36		I. E. f.	11 44.8
4	II. Im.	9 27	13	I. Im.	6 25		III. Tr. f.	13 25
	I. Im.	10 6		II. Tr. c.	6 35		II. Sh. f.	13 59
	I. E. f.	13 26.5		III. Tr. c.	7 7		III. Sh. c.	16 0
	II. E. f.	14 15.8		II. Sh. c.	8 59		III. Sh. f.	18 36
				II. Tr. f.	8 59	21	I. Tr. c.	5 33
5	I. Tr. c.	7 20		III. Tr. f.	9 34		I. Sh. c.	6 49
	I. Sh. c.	8 29		I. E. f.	9 50.0		I. Tr. f.	7 45
	I. Tr. f.	9 32		II. Sh. f.	11 24		I. Sh. f.	9 1
	I. Sh. f.	10 41		III. Sh. c.	12 0	22	I. Im.	2 46
6	III. Tr. c.	3 22	14	III. Sh. f.	14 35		II. Im.	3 47
	II. Tr. c.	4 8					I. E. f.	6 13.6
	I. Im.	4 34		I. Tr. c.	3 40		II. Em.	6 14
	III. Tr. f.	5 47		I. Sh. c.	4 53		II. E. c.	6 22.8
	II. Sh. c.	6 24		I. Tr. f.	5 51		II. E. f.	8 51.5
	II. Tr. f.	6 31		I. Sh. f.	7 5	23	I. Tr. c.	0 2
	I. E. f.	7 55.2					I. Sh. c.	1 18
	III. Sh. c.	8 0	15	I. Im.	0 53		I. Tr. f.	2 13
	II. Sh. f.	8 49		II. Im.	1 14		I. Sh. f.	3 30
	III. Sh. f.	10 34		II. Em.	3 40		I. Im.	21 14
7	I. Tr. c.	1 48		II. E. c.	3 45.0		II. Tr. c.	22 21
	I. Sh. c.	2 58		I. E. f.	4 18.7	24	I. E. f.	0 42.3
	I. Tr. f.	3 59		II. E. f.	6 13.4		II. Tr. f.	0 45
	I. Sh. f.	5 10		I. Tr. c.	22 8		II. Sh. c.	0 51
	II. Im.	22 43		I. Sh. c.	23 22		III. Im.	0 57
	I. Im.	23 2					II. Sh. f.	3 16
8	I. E. f.	2 23.9	16	I. Tr. f.	0 20		III. Em.	3 29
	II. E. f.	3 35.3		I. Sh. f.	1 34		III. E. c.	6 5.4
	I. Tr. c.	20 16		I. Im.	19 21		III. E. f.	8 43.8
	I. Sh. c.	21 27		II. Tr. c.	19 50		I. Tr. c.	18 30
	I. Tr. f.	22 27		III. Im.	21 6			
	I. Sh. f.	23 39		II. Tr. f.	22 14			
9	III. Im.	17 20		II. Sh. c.	22 16			
	II. Tr. c.	17 21		I. E. f.	22 47.4			
				III. Em.	23 36			

Eclipse commences - - - E. c.

„ finishes - - - E. f.

Occultation, immersion - - Im.

„ emersion - - Em.

Transit commences - - - Tr. c.

„ finishes - - - Tr. f.

Shadow commences - - - Sh. c.

„ finishes - - - Sh. f.





AUGUST.

MEAN TIME.

Configurations at 8^h 45^m for an inverting Telescope.

Day	West.	East.
1	·3	○ ⁴ ·1 ²
2		·1 ·3 ○ 2 [·] ·4
3	2 [·]	○ 1 [·] ·3 ·4
4		○ ² ₁ ·3 ·4
5	1. ○	○ 2 ³ ·4
6		2 [·] ₃ ○ ·1 4 [·]
7	3 [·] ·2 1 [·]	○ 4 [·]
8	·3	○ ·2 [·] ₁ 4 [·]
9		1 ³ ○ 4 [·] 2 [·]
10	2 [·] 4 [·]	○ 1 [·] ·3
11	4 [·]	·2 [·] ₁ ○ ·3
12	4 [·]	○ ·2 3 [·]
13	2. ○ 3. ○ 4 [·]	○ ● ·1
14	·4 3 [·] ·2 1 [·]	○
15	·4 ·3	○ 2 [·] ₁
16	·4 1 ³	○ 2 [·]
17	2 [·] 4 [·]	○ 1 [·] 3 [·]
18	·2 [·] ₁	○ ·4 ·3
19		○ 1 [·] ·2 3 [·] 4 [·]
20	· ● 1	2 [·] ○ ³ ·4
21	3 [·] ·2 1 [·]	○ ·4
22	·3	○ ·1 4 [·] ● ·2
23	·3 1 [·]	○ 2 [·] 4 [·]
24	2 [·]	○ ·3 ·1 4 [·]
25	2 [·] ₁	○ 4 [·] ·3
26		4 [·] ○ 1 [·] ·2 3 [·]
27	4 [·]	·1 ○ 2 [·] ₃
28	1. ○ 4 [·] 2 [·] ₃	○
29	4 [·] 3 [·]	○ ·1 ● ·2
30	4 [·] ·3 1 [·]	○ 2 [·]
31	·4 2 [·]	○ ³ ·1

Phases of the Eclipses of the Satellites for an inverting Telescope.

I.		*f	II.		*c *f
III.		*c *f	IV.	No Eclipse of this Satellite.	

SEPTEMBER.

MEAN TIME.

Day.	h m	Day.	h m	Day.	h m	Day.	h m
1	I. Im. 17 37	8	I. E. f. 23 08	16	II. Em. 3 28	23	II. E. f. 8 41.9
	II. Im. 19 40				II. E. c. 3 34.3		I. Tr. c. 20 44
	I. E. f. 21 5.9	9	II. Em. 0 47		II. E. f. 6 4.1		I. Sh. c. 21 57
	II. Em. 22 8		II. E. c. 0 56.7		I. Tr. c. 18 46		I. Tr. f. 22 56
	II. E. c. 22 19.0		II. E. f. 3 26.2		I. Sh. c. 20 2		
			I. Tr. c. 16 50		I. Tr. f. 20 58		
2	II. E. f. 0 48.2		I. Sh. c. 18 6		I. Sh. f. 22 14	24	I. Sh. f. 0 9
	I. Tr. c. 14 54		I. Tr. f. 19 1	17	I. Im. 15 57		I. Im. 17 54
	I. Sh. c. 16 11		I. Sh. f. 20 18		I. E. f. 19 24.5		I. E. f. 21 19.4
	I. Tr. f. 17 5				II. Tr. c. 19 25		II. Tr. c. 22 5
	I. Sh. f. 18 23	10	I. Im. 14 1		II. Tr. f. 21 51	25	II. Sh. c. 0 29
			II. Tr. c. 16 47		II. Sh. c. 21 53		II. Tr. f. 0 31
3	I. Im. 12 5		I. E. f. 17 29.6	18	II. Sh. f. 0 20		II. Sh. f. 2 56
	II. Tr. c. 14 11		I. Tr. f. 19 13		III. Tr. c. 2 54		III. Tr. c. 7 4
	I. E. f. 15 34.6		II. Sh. c. 19 18		III. Tr. f. 5 29		III. Tr. f. 9 40
	II. Tr. f. 16 36		II. Sh. f. 21 45		III. Sh. c. 7 57		III. Sh. c. 11 57
	II. Sh. c. 16 43		III. Tr. c. 22 49		III. Sh. f. 10 37		III. Sh. f. 14 38
	III. Tr. c. 18 47	11	III. Tr. f. 1 22		I. Tr. c. 13 16		I. Tr. c. 15 13
	II. Sh. f. 19 9		III. Sh. c. 3 57		I. Sh. c. 14 30		I. Sh. c. 16 26
	III. Tr. f. 21 19		III. Sh. f. 6 36		I. Tr. f. 15 27		I. Tr. f. 17 25
	III. Sh. c. 23 58		I. Tr. c. 11 19		I. Sh. f. 16 42		I. Sh. f. 18 38
			I. Sh. c. 12 35				
4	II. Sh. f. 2 36		I. Tr. f. 13 30			26	I. Im. 12 23
	I. Tr. c. 9 23		I. Sh. f. 14 47	19	I. Im. 10 26		I. E. f. 15 48.2
	I. Sh. c. 10 40				I. E. f. 13 53.3		II. Im. 17 3
	I. Tr. f. 11 34	12	I. Im. 8 30		II. Im. 14 20		II. E. f. 22 1.0
	I. Sh. f. 12 52		II. Im. 11 39		II. Em. 16 49		
			I. E. f. 11 58.3		II. E. c. 16 53.4	27	I. Tr. c. 9 43
5	I. Im. 6 34		II. Em. 14 8		II. E. f. 19 23.3		I. Sh. c. 10 55
	II. Im. 9 0		II. E. c. 14 15.9	20	I. Tr. c. 7 45		I. Tr. f. 11 55
	I. E. f. 10 3.4		II. E. f. 16 45.5		I. Sh. c. 8 59		I. Sh. f. 13 7
	II. Em. 11 28				I. Tr. f. 9 57		
	II. E. c. 11 38.3	13	I. Tr. c. 5 48		I. Sh. f. 11 11	28	I. Im. 6 53
	II. E. f. 14 7.6		I. Sh. c. 7 4				I. E. f. 10 16.9
			I. Tr. f. 8 0				II. Tr. c. 11 25
6	I. Tr. c. 3 52		I. Sh. f. 9 16	21	I. Im. 4 55		II. Sh. c. 13 46
	I. Sh. c. 5 9				I. E. f. 8 22.0		II. Tr. f. 13 52
	I. Tr. f. 6 3	14	I. Im. 2 59		II. Tr. c. 8 45		II. Sh. f. 16 14
	I. Sh. f. 7 20		II. Tr. c. 6 6		II. Tr. f. 11 11		III. Im. 21 14
			I. E. f. 6 27.0		II. Sh. c. 11 11		III. Em. 23 53
7	I. Im. 1 3		II. Tr. f. 8 32		II. Sh. f. 13 38		
	II. Tr. c. 3 29		II. Sh. c. 8 36		III. Im. 17 3	29	III. E. c. 2 1.9
	I. E. f. 4 32.1		II. Sh. f. 11 3		III. Em. 19 41		I. Tr. c. 4 12
	II. Tr. f. 5 54		III. Im. 12 56		III. E. c. 22 3.0		I. E. f. 4 46.0
	II. Sh. c. 6 1		III. Em. 15 33	22	III. E. f. 0 45.9		I. Sh. c. 5 23
	II. Sh. f. 8 27		III. E. c. 18 3.8		I. Tr. c. 2 14		I. Tr. f. 6 24
	III. Im. 8 52		III. E. f. 20 45.5		I. Sh. c. 3 28		I. Sh. f. 7 36
	III. Em. 11 27				I. Tr. f. 4 26	30	
	III. E. c. 14 4.2	15	I. Tr. c. 0 17		I. Sh. f. 5 40		I. Im. 1 22
	III. E. f.		I. Sh. c. 1 33		I. Im. 23 25		I. E. f. 4 45.7
	I. Tr. c. 22 21		I. Tr. f. 2 29				II. Im. 6 25
	I. Sh. c. 23 37		I. Sh. f. 3 45				II. E. f. 11 19.5
			I. Im. 21 28	23	I. E. f. 2 50.7		I. Tr. c. 22 42
8	I. Tr. f. 0 32				II. Im. 3 41		I. Sh. c. 23 52
	I. Sh. f. 1 49	16	I. E. f. 0 55.8		II. Em. 6 10		
	I. Im. 19 32		II. Im. 0 59		II. E. c. 6 11.8		
	II. Im. 22 19						

Eclipse commences - - - E. c.

„ finishes - - - - E. f.

Transit commences - - - Tr. c.

„ finishes - - - - Tr. f.

Occultation, immersion - - Im.

emersion - - Em.

Shadow commences - - - Sh. c.

„ finishes - - - - Sh. f.

SATELLITES OF JUPITER, 1924. 541

SEPTEMBER.

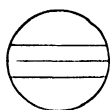
MEAN TIME.

Configurations at 7^h 15^m for an inverting Telescope.

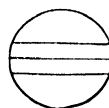
Day.	West.			East.		
1		4	2 1	○	3	
2		4		○	1 2	3
3			4 1	○	2 3	
4			2 3	○	1 4	
5	● 1		3	○ 2		4
6			3	1 ○	2	4
7				2 ○ 3	1	4
8			2 1	○	3	4
9				○	2 3	4
10			1	○	2 3	4
11			2 3	○	1 4	
12			3	2 ○ 1		
13	1 ○		3 4	○	2	
14		4		3 ○ 1		2 ○
15		4	2 1	○	3	
16		4		○	2 1	3
17		4		1 ○	2 3	
18		4	2 3	○	1	
19			3 4	2 1 ○		
20			3	4 ○	2	
21				3 2 ○	4	● 1
22			2	1 ○	3	4
23				○	1	3 4
24			1	○	2 3	4
25			2	○	1	4
26			3	2 1 ○		4
27			3	○	1 2	4
28	● 1		3	○	2 4	
29			2	4 1 ○	3	
30	● 2		4	○	1	3

Phases of the Eclipses of the Satellites for an inverting Telescope.

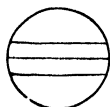
I.



II.

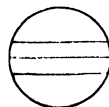


III.



IV.

No Eclipse



of this Satellite.

542 SATELLITES OF JUPITER, 1924.

OCTOBER.

MEAN TIME.

Day.		h m	Day.		h m	Day.		h m	Day.		h m
1	I. Tr. f.	0 54	9	II. Sh. c.	5 39	16	III. Tr. f.	22 30	24	I. Im.	20 19
	I. Sh. f.	2 5		II. Tr. f.	5 56		I. Tr. f.	23 23		I. E. f.	23 27.9
	I. Im.	19 52		II. Sh. f.	8 8		III. Sh. c.	23 55			
	I. E. f.	23 14.4		III. Tr. c.	15 31	17	I. Sh. f.	0 24	25	II. Im.	4 6
2	II. Tr. c.	0 46		III. Tr. f.	18 11		III. Sh. f.	2 40		II. E. f.	8 30.1
	II. Sh. c.	3 4		I. Tr. c.	19 11		I. Im.	18 19		I. Tr. c.	17 41
	II. Tr. f.	3 13		III. Sh. c.	19 56		I. E. f.	21 33.0		I. Sh. c.	18 35
	II. Sh. f.	5 32		I. Sh. c.	20 16	18	II. Im.	1 19		I. Tr. f.	19 53
	III. Tr. c.	11 16		I. Tr. f.	21 23		II. E. f.	5 53.1		I. Sh. f.	20 48
	III. Tr. f.	13 54		I. Sh. f.	22 29		I. Tr. c.	15 40	26	I. Im.	14 49
	III. Sh. c.	15 57		III. Sh. f.	22 40		I. Sh. c.	16 40		I. E. f.	17 56.6
	I. Tr. c.	17 12	10	I. Im.	16 20		I. Tr. f.	17 53		II. Tr. c.	22 21
	I. Sh. c.	18 21		I. E. f.	19 38.1		I. Sh. f.	18 53			
	II. Sh. f.	18 39		II. Im.	22 32	19	I. Im.	12 49	27	II. Sh. c.	0 8
	I. Tr. f.	19 24	11	II. E. f.	3 15.9		I. E. f.	16 1.7		II. Tr. f.	0 50
	I. Sh. f.	20 33		I. Tr. c.	13 41		II. Tr. c.	19 35		II. Sh. f.	2 38
3	I. Im.	14 21		I. Sh. c.	14 45		II. Sh. c.	21 32		I. Tr. c.	12 11
	I. E. f.	17 43.2		I. Tr. f.	15 53		II. Tr. f.	22 3		I. Sh. c.	13 4
	II. Im.	19 47		I. Sh. f.	16 58	20	II. Sh. f.	0 2		III. Im.	14 22
4	II. E. f.	0 38.5	12	I. Im.	10 50		III. Im.	10 1		I. Tr. f.	14 23
	I. Tr. c.	11 42		I. E. f.	14 6.8		I. Tr. c.	10 10		I. Sh. f.	15 17
	I. Sh. c.	12 50		II. Tr. c.	16 50		I. Sh. c.	11 9		III. Em.	17 8
	I. Tr. f.	13 54		II. Sh. c.	18 57		I. Tr. f.	12 23		III. E. c.	17 58.8
	I. Sh. f.	15 2		II. Tr. f.	19 18		III. Em.	12 45		III. E. f.	20 47.4
				II. Sh. f.	21 26		I. Sh. f.	13 22	28	I. Im.	9 19
5	I. Im.	8 51	13	III. Im.	5 43		III. E. c.	13 59.5		I. E. f.	12 25.4
	I. E. f.	12 11.9		I. Tr. c.	8 11	21	I. Im.	7 19		II. Im.	17 30
	II. Tr. c.	14 7		III. Em.	8 25		I. E. f.	10 30.5		II. E. f.	21 48.3
	II. Sh. c.	16 22		I. Sh. c.	9 14		II. Im.	14 42	29	I. Tr. c.	6 41
	II. Tr. f.	16 34		III. E. c.	10 0.0		II. E. f.	19 11.4		I. Sh. c.	7 33
	II. Sh. f.	18 50		I. Tr. f.	10 23	22	I. Tr. c.	4 40		I. Tr. f.	8 54
6	III. Im.	1 27	14	I. Sh. f.	11 26		I. Sh. c.	5 38		I. Sh. f.	9 46
	III. Em.	4 7		III. E. f.	12 46.3		I. Tr. f.	6 53	30	I. Im.	3 49
	III. E. c.	6 1.0		I. Im.	5 20		I. Sh. f.	7 51		I. E. f.	6 54.1
	I. Tr. c.	6 11		I. E. f.	8 35.5	23	I. Im.	1 49		II. Tr. c.	11 44
	I. Sh. c.	7 19	15	II. Im.	11 55		I. E. f.	4 59.1		II. Sh. c.	13 26
	I. Tr. f.	8 23		II. E. f.	16 34.3		II. Tr. c.	8 58		II. Tr. f.	14 13
	III. E. f.	8 46.2					II. Sh. f.	13 20		II. Sh. f.	15 56
	I. Sh. f.	9 31	16			24	I. Tr. c.	23 10	31	I. Tr. c.	1 11
7	I. Im.	3 21		I. Tr. c.	2 41		I. Sh. c.	0 7		I. Sh. c.	2 2
	I. E. f.	6 40.6		I. Sh. c.	3 43		III. Tr. c.	0 8		I. Tr. f.	3 24
	II. Im.	9 9		I. Tr. f.	4 53		I. Tr. f.	1 23		I. Sh. f.	4 14
	II. E. f.	13 57.0		I. Sh. f.	5 55		I. Sh. f.	2 19		III. Tr. c.	4 29
				I. Im.	23 49		III. Tr. f.	2 51		III. Tr. f.	7 14
8	I. Tr. c.	0 41		I. E. f.	3 4.2		III. Sh. c.	3 54		III. Sh. c.	7 53
	I. Sh. c.	1 48		II. Tr. c.	6 12		III. Sh. f.	6 40		III. Sh. f.	10 41
	I. Tr. f.	2 53		II. Sh. c.	8 15					I. Im.	22 19
	I. Sh. f.	4 0		II. Tr. f.	8 40						
	I. Im.	21 50		II. Sh. f.	10 44						
				III. Tr. c.	19 48						
9	I. E. f.	1 9.3		I. Tr. c.	21 10						
	II. Tr. c.	3 28		I. Sh. c.	22 12						

Eclipse commences - - - E. c.

,, finishes - - - E. f.

Occultation, immersion - - Im.

,, emersion - - Em.

Transit commences - - - Tr. c.

,, finishes - - - Tr. f.

Shadow commences - - - Sh. c.

,, finishes - - - Sh. f.

SATELLITES OF JUPITER, 1924. 543

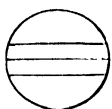
OCTOBER. MEAN TIME.

Configurations at 5^h 45^m for an inverting Telescope.

Day.	<i>West.</i>			<i>East.</i>		
1	4.	1.	○	2.	3.	
2	4.	2.	○	3.	1.	
3	4.	3.	○	1.	2.	
4	4.	3.	○	1.	2.	
5	4.	3.	○	2.		
6	4.	2.	○	3.		
7		4.	○	3.		● .1
8		1.	○	4.	2.	3.
9	2.	○		3.	1.	4.
10		3.	○	4.		
11	3.		○	2.	1.	4.
12	3.	1.	○	2.		4.
13	● .3	2.	○	1.		4.
14	● .1	2.	○	3.	4.	
15		1.	○	4.	2.	3.
16		4.	○	1.	3.	
17	4.	2.	○			
18	4.	3.	○	1.		● .2
19	4.	3.	○	2.		
20	4.	2.	○	1.	3.	
21	4.	2.	○	3.		
22	1.	○		2.	3.	
23		4.	○	1.	2.	3.
24		2.	○	1.	3.	4.
25	3.		○	1.	4.	● .2
26	3.	1.	○	2.	4.	
27		3.	○	1.		4.
28		2.	○	3.		4.
29		1.	○	2.	3.	4.
30			○	2.	3.	4.
31		2.	○	4.		3.

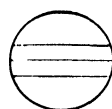
Phases of the Eclipses of the Satellites for an inverting Telescope.

I.



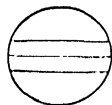
*f

II.



*f

III.



*C *f

IV.

No Eclipse



of this Satellite.

544 SATELLITES OF JUPITER, 1924.

NOVEMBER.

MEAN TIME.

Day.		h m	Day.		h m	Day.		h m	Day.		h m
1	I. E. f.	1 22.8	9	I. Sh. f.	0 38	17	I. Tr. c.	18 13	25	III. Im.	8 2
	II. Im.	6 54		I. Im.	18 50		I. Sh. c.	18 49		III. E. f.	12 48.0
	II. E. f.	11 6.9		I. E. f.	21 46.3		I. Tr. f.	20 27		I. Im.	17 23
	I. Tr. c.	19 41					I. Sh. f.	21 2		I. E. f.	20 4.6
	I. Sh. c.	20 30	10	II. Tr. c.	3 55	18	III. Im.	3 35	26	II. Im.	4 47
	I. Tr. f.	21 54		II. Sh. c.	5 19		III. E. f.	8 48.0		II. E. f.	8 13.6
	I. Sh. f.	22 43		II. Tr. f.	6 26		I. Im.	15 22		I. Tr. c.	14 45
2	I. Im.	16 49		II. Sh. f.	7 50		I. E. f.	18 9.9		I. Sh. c.	15 12
	I. E. f.	19 51.5		I. Tr. c.	16 12					I. Tr. f.	16 59
3	II. Tr. c.	1 7		I. Sh. c.	16 54	19	II. Im.	1 57		I. Sh. f.	17 25
	II. Sh. c.	2 44		I. Tr. f.	18 25		II. E. f.	5 37.6			
	II. Tr. f.	3 37		I. Sh. f.	19 7		I. Tr. c.	12 44			
	II. Sh. f.	5 14		III. Im.	23 10		I. Sh. c.	13 17	27	I. Im.	11 54
	I. Tr. c.	14 11	11	III. E. f.	4 48.1		I. Tr. f.	14 57		I. E. f.	14 33.2
	I. Sh. c.	14 59		I. Im.	13 20		I. Sh. f.	15 30		II. Tr. c.	22 58
	I. Tr. f.	16 24		I. E. f.	16 15.1	20	I. Im.	9 52		II. Sh. f.	23 49
	I. Sh. f.	17 12		II. Im.	23 8		I. E. f.	12 38.5	28	II. Tr. f.	1 30
	III. Im.	18 45	12	II. E. f.	3 1.4		II. Tr. c.	20 8		I. Tr. c.	9 16
	III. Em.	21 32		I. Tr. c.	10 43		II. Sh. c.	21 13		I. Sh. c.	9 40
	III. E. c.	21 58.3		I. Sh. c.	11 23		II. Tr. f.	22 40		I. Tr. f.	11 29
4	III. E. f.	0 48.0		I. Tr. f.	12 56		II. Sh. f.	23 45		I. Sh. f.	11 54
	I. Im.	11 20		I. Sh. f.	13 36	21				III. Tr. c.	22 12
	I. E. f.	14 20.2	13	I. Im.	7 51		I. Tr. c.	7 14		III. Sh. c.	23 50
	II. Im.	20 19		I. E. f.	10 43.7		I. Sh. c.	7 46			
5	II. E. f.	0 25.0		II. Tr. c.	17 19		I. Tr. f.	9 27			
	I. Tr. c.	8 42		II. Sh. c.	18 37		I. Sh. f.	9 59			
	I. Sh. c.	9 28		II. Tr. f.	19 50	22	III. Tr. c.	17 44			
	I. Tr. f.	10 54		II. Sh. f.	21 9		III. Sh. c.	19 51			
	I. Sh. f.	11 41	14	I. Tr. c.	5 13		III. Tr. f.	20 34			
6	I. Im.	5 50		I. Sh. c.	5 51		III. Sh. f.	22 42			
	I. E. f.	8 48.9		I. Tr. f.	7 26	23	I. Im.	4 22			
	II. Tr. c.	14 31		I. Sh. f.	8 4		I. E. f.	7 7.3			
	II. Sh. c.	16 2		III. Tr. c.	13 18		II. Im.	15 22			
	II. Tr. f.	17 1		III. Sh. c.	15 52		II. E. f.	18 55.8			
	II. Sh. f.	18 32		III. Tr. f.	16 6	24	I. Tr. c.	1 44			
7	I. Tr. c.	3 12	15	III. Sh. f.	18 42		I. Sh. c.	2 15			
	I. Sh. c.	3 56		I. Im.	2 21		I. Tr. f.	3 58			
	I. Tr. f.	5 25		I. E. f.	5 12.5		I. Sh. f.	4 28			
	I. Sh. f.	6 9		II. Im.	12 32		I. Im.	22 53			
	III. Tr. c.	8 52		II. E. f.	16 19.7						
	III. Tr. f.	11 39		I. Tr. c.	23 43	25	I. Tr. c.	1 44			
	III. Sh. c.	11 52	16	I. Sh. c.	0 20		I. Sh. c.	2 15			
	III. Sh. f.	14 41		I. Tr. f.	1 56		I. Tr. f.	3 58			
8	I. Im.	0 20		I. Sh. f.	2 33		I. Sh. f.	4 28			
	I. E. f.	3 17.7		I. Im.	20 51		I. Im.	22 53			
	II. Im.	9 43		I. E. f.	23 41.2	26	I. E. f.	1 35.9			
	II. E. f.	13 43.4	17	II. Tr. c.	6 43		II. Tr. c.	9 33			
	I. Tr. c.	21 42		II. Sh. c.	7 55		II. Sh. c.	10 31			
	I. Sh. c.	22 25		II. Tr. f.	9 15		II. Tr. f.	12 5			
	I. Tr. f.	23 55		II. Sh. f.	10 27		II. Sh. f.	13 3			
							I. Tr. c.	20 15			
							I. Sh. c.	20 43			
							I. Tr. f.	22 28			
							I. Sh. f.	22 57			

Eclipse commences - - - E. c.
 „ finishes - - - E. f.

Transit commences - - - Tr. c.
 „ finishes - - - Tr. f.

Occultation, immersion - - Im.
 „ emersion - - Em.

Shadow commences - - - Sh. c.
 „ finishes - - - Sh. f.

SATELLITES OF JUPITER, 1924. 545

NOVEMBER.

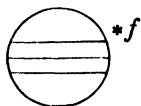
MEAN TIME.

Configurations at 4^h 30^m for an inverting Telescope.

Day.	<i>West.</i>		<i>East.</i>	
1		3. .2	○ 4 ¹	
2		.3 1. 4.	○ .2	
3		4. .3	○ .1	
4		4. .2 1.	○ .3	
5		4.	○ 1. 2. .3	
6		.4	○ 1. 2. 3.	
7	1. ○	.4 . 2.	○ 3.	
8		.4 3. .2	○ .1	
9		3. .4 1.	○ .2	
10		.3	○ 4. .1	2 ○ .
11		.2 1.	○ .4	● .3
12			○ .2 1. .3 .4	
13		.1	○ 2. 3. .4	
14		2. 1	○ 3. .4	
15		3. .2	○ 4.	● .1
16		3. 1.	○ .2 4.	
17		.3	○ 2. 1. 4.	
18	● 3	2. 1.	○ 4.	
19		4. .	○ 1. .3	● .2
20		4. .1	○ 2. 3.	
21		4. 2.	○ 1. 3.	
22	● 1	4. .2 3	○	
23		.4 3.	1. ○ .2	
24		.4 .3	○ .1 2.	
25		.4 2. 1.	.3 ○	
26	● 2	.4	○ .1 .3	
27		.1	○ 4. 2. .3	
28		2.	○ 1. 3. .4	

Phases of the Eclipses of the Satellites for an inverting Telescope.

I.



II.

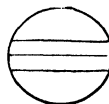


III.



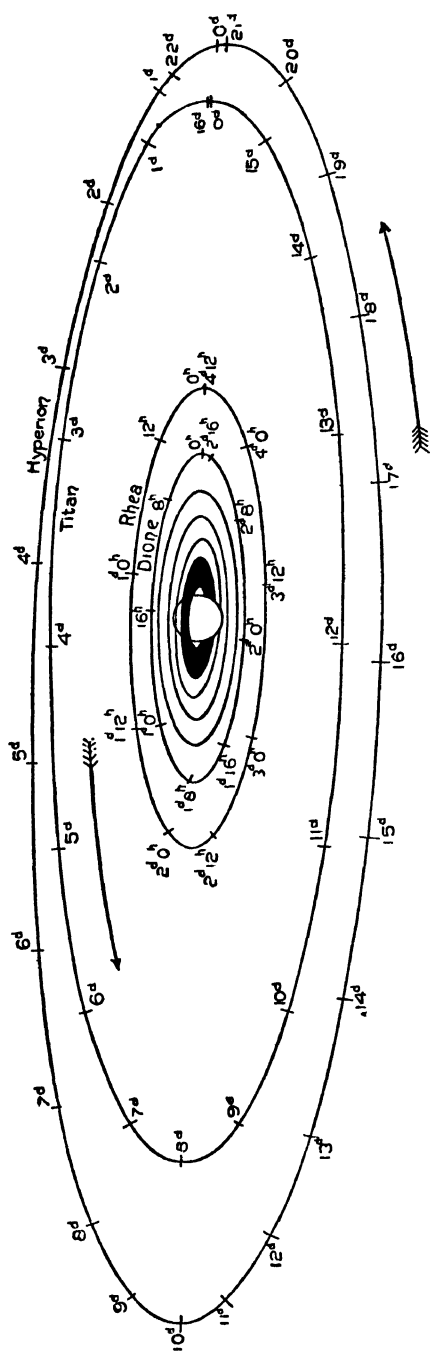
IV.

No
Eclipse



of this
Satellite.

South



North

- NAMES OF THE SATELLITES.
- I. Mimas.
 - II. Enceladus.
 - III. Tethys.
 - IV. Dione.
 - V. Rhea.
 - VI. Titan.
 - VII. Hyperion.
 - VIII. Iapetus.
 - IX. Phœbe.

APPARENT ORBITS OF THE SEVEN INNER SATELLITES OF SATURN, AT DATE OF OPPOSITION, APRIL 18, 1924, AS SEEN IN AN INVERTING TELESCOPE.

MEAN SYNODIC PERIODS.	d h	
	d	h
I.	0	22.6
II.	1	8.9
III.	1	21.3
IV.	2	17.7
V.	4	12.5
VI.	15	23.3
VII.	21	7.6
VIII.	79	22.1
IX.	523	15.6

SATELLITES OF SATURN, 1924. 547

MIMAS.

Greenwich Mean Time of Eastern Elongation.

Jan.	d h	Feb.	d h	Mar.	d h	May	d h	June	d h	July	d h
	1 21.2	13 6.9		26 16.6		8 2.2		19 12.0		31 21.9	
	2 19.8	14 5.5		27 15.2		9 0.8		20 10.6		Aug. 1 20.6	
	3 18.4	15 4.1		28 13.8		9 23.5		21 9.2		2 19.2	
	4 17.0	16 2.7		29 12.4		10 22.1		22 7.8		3 17.8	
	5 15.6	17 1.4		30 11.0		11 20.7		23 6.4		4 16.5	
	6 14.2	18 0.0		31 9.6		12 19.3		24 5.1		5 15.1	
	7 12.8	18 22.6	Apr.	1 8.2		13 17.9		25 3.7		6 13.7	
	8 11.4	19 21.3		2 6.9		14 16.5		26 2.3		7 12.3	
	9 10.0	20 19.9		3 5.5		15 15.1		27 0.9		8 11.0	
	10 8.6	21 18.5		4 4.1		16 13.7		27 23.5		9 9.6	
	11 7.2	22 17.1		5 2.7		17 12.4		28 22.1		10 8.2	
	12 5.9	23 15.7		6 1.3		18 11.0		29 20.7		11 6.8	
	13 4.5	24 14.3		7 0.0		19 9.6		30 19.4		12 5.4	
	14 3.1	25 12.9		7 22.6		20 8.2	July	1 18.0		13 4.1	
	15 1.8	26 11.5		8 21.2		21 6.8		2 16.6		14 2.7	
	16 0.4	27 10.1		9 19.8		22 5.5		3 15.2		15 1.3	
	16 23.0	28 8.8		10 18.4		23 4.1		4 13.9		16 0.0	
	17 21.6	29 7.4		11 17.0		24 2.7		5 12.5		16 22.6	
	18 20.3	Mar. 1 6.0		12 15.6		25 1.3		6 11.1		17 21.2	
	19 18.9	2 4.6		13 14.2		25 23.9		7 9.7		18 19.8	
	20 17.5	3 3.3		14 12.8		26 22.6		8 8.3		19 18.4	
	21 16.1	4 1.9		15 11.4		27 21.2		9 7.0		20 17.1	
	22 14.7	5 0.5		16 10.0		28 19.8		10 5.6		21 15.7	
	23 13.3	5 23.2		17 8.6		29 18.4		11 4.2		22 14.3	
	24 12.0	6 21.8		18 7.2		30 17.0		12 2.8		23 12.9	
	25 10.6	7 20.4		19 5.9		31 15.6		13 1.5			
	26 9.2	8 19.0		20 4.5	June	1 14.2		14 0.1			
	27 7.8	9 17.6		21 3.1		2 12.9		14 22.7			
	28 6.5	10 16.3		22 1.7		3 11.5		15 21.3			
	29 5.1	11 14.9		23 0.4		4 10.2		16 20.0			
	30 3.7	12 13.5		23 23.0		5 8.8		17 18.6			
	31 2.3	13 12.1		24 21.6		6 7.4		18 17.3			
Feb.	1 0.9	14 10.8		25 20.2		7 6.0		19 15.9			
	1 23.5	15 9.4		26 18.9		8 4.6		20 14.5			
	2 22.1	16 8.0		27 17.5		9 3.2		21 13.1			
	3 20.8	17 6.6		28 16.1		10 1.9		22 11.7			
	4 19.4	18 5.2		29 14.7		11 0.5		23 10.3			
	5 18.0	19 3.8		30 13.3		11 23.1		24 9.0			
	6 16.6	20 2.4	May	1 11.9		12 21.7		25 7.6			
	7 15.2	21 1.0		2 10.6		13 20.3		26 6.2			
	8 13.8	21 23.6		3 9.2		14 18.9		27 4.9			
	9 12.4	22 22.2		4 7.8		15 17.5		28 3.5			
	10 11.0	23 20.8		5 6.4		16 16.1		29 2.1			
	11 9.6	24 19.4		6 5.0		17 14.7		30 0.7			
	12 8.2	25 18.0		7 3.6		18 13.4		30 23.3			

548 SATELLITES OF SATURN, 1924.

ENCELADUS.

Greenwich Mean Time of Eastern Elongation.

	d	h		d	h		d	h		d	h		d	h		d	h
Jan.	2	3.1	Feb.	10	20.9	Mar.	21	14.4	Apr.	30	7.7	June	9	1.3	July	18	19.0
	3	12.0		12	5.7		22	23.2	May	1	16.6		10	10.2		20	3.9
	4	20.9		13	14.6		24	8.1		3	1.5		11	19.0		21	12.8
	6	5.8		14	23.5		25	17.0		4	10.4		13	3.9		22	21.7
	7	14.7		16	8.4		27	1.9		5	19.2		14	12.8		24	6.6
	8	23.6		17	17.3		28	10.7		7	4.1		15	21.7		25	15.4
	10	8.5		19	2.2		29	19.6		8	13.0		17	6.6		27	0.3
	11	17.4		20	11.0		31	4.5		9	21.9		18	15.4		28	9.2
	13	2.3		21	19.9	Apr.	1	13.4		11	6.7		20	0.3		29	18.1
	14	11.2		23	4.8		2	22.3		12	15.6		21	9.2		31	3.0
	15	20.1		24	13.7		4	7.2		14	0.5		22	18.1	Aug.	1	11.9
	17	5.0		25	22.5		5	16.1		15	9.4		24	3.0		2	20.8
	18	13.9		27	7.4		7	1.0		16	18.3		25	11.9		4	5.7
	19	22.8		28	16.3		8	9.8		18	3.1		26	20.7		5	14.6
	21	7.6	Mar.	1	1.2		9	18.7		19	12.0		28	5.6		6	23.5
	22	16.5		2	10.0		11	3.5		20	20.9		29	14.5		8	8.4
	24	1.4		3	18.9		12	12.4		22	5.8		30	23.4		9	17.3
	25	10.3		5	3.8		13	21.2		23	14.7	July	2	8.3		11	2.2
	26	19.2		6	12.7		15	6.1		24	23.6		3	17.2		12	11.1
	28	4.1		7	21.5		16	15.0		26	8.4		5	2.1		13	20.0
	29	13.0		9	6.4		17	23.9		27	17.3		6	11.0		15	4.9
	30	21.9		10	15.3		19	8.7		29	2.2		7	19.9		16	13.8
Feb.	1	6.8		12	0.2		20	17.6		30	11.1		9	4.7		17	22.7
	2	15.7		13	9.1		22	2.5		31	20.0		10	13.6		19	7.6
	4	0.5		14	17.9		23	11.4	June	2	4.9		11	22.5		20	16.5
	5	9.4		16	2.8		24	20.2		3	13.7		13	7.4		22	1.4
	6	18.2		17	11.7		26	5.1		4	22.6		14	16.3		23	10.3
	8	3.1		18	20.6		27	14.0		6	7.5		16	1.2		24	19.2
	9	12.0		20	5.5		28	22.9		7	16.4		17	10.1			

TETHYS.

Greenwich Mean Time of Eastern Elongation.

	d	h		d	h		d	h		d	h		d	h		d	h						
Jan.	1	17.1	Jan.	20	14.9	Feb.	8	11.7	Feb.	27	8.6	Mar.	17	5.5	Apr.	5	2.4						
	3	14.5			22		12.3			10	9.0			29		5.9		19	2.8		6	23.7	
	5	11.9			24		9.6			12	6.3		Mar.	2		3.2		21	0.1		8	21.0	
	7	9.3			26		7.0			14	3.6					4	0.4		22	21.4		10	18.3
	9	6.7			28		4.3			16	0.8					5	21.7		24	18.7		12	15.6
11	4.1		30	1.6		17	22.1		7	19.0		26	16.0		14	12.9							
13	1.4		31	22.8		19	19.4		9	16.3		28	13.3		16	10.2							
14	22.8	Feb.	2	20.0		21	16.7		11	13.6		30	10.6		18	7.5							
16	20.2			4	17.2		23	14.0		13	10.9	Apr.	1	7.9		20	4.7						
18	17.5			6	14.4		25	11.3		15	8.2			3	5.2		22	2.0					

SATELLITES OF SATURN, 1924. 549

TETHYS—continued.

Greenwich Mean Time of Eastern Elongation.

d	h	d	h	d	h	d	h	d	h	d	h
Apr. 23	23·3	May 14	17·5	June 4	11·8	June 25	6·2	July 16	0·6	Aug. 5	19·2
25	20·6	16	14·8	6	9·1	27	3·5	17	21·9	7	16·5
27	17·9	18	12·1	8	6·4	29	0·8	19	19·2	9	13·8
29	15·2	20	9·4	10	3·7	30	22·1	21	16·6	11	11·1
May 1	12·5	22	6·7	12	1·0	July 2	19·4	23	13·9	13	8·4
3	9·8	24	4·0	13	22·3	4	16·7	25	11·2	15	5·8
5	7·1	26	1·3	15	19·6	6	14·0	27	8·5	17	3·1
7	4·3	27	22·6	17	16·9	8	11·3	29	5·9	19	0·4
9	1·6	29	19·9	19	14·2	10	8·7	31	3·2	20	21·7
10	22·9	31	17·2	21	11·5	12	6·0	Aug. 2	0·5	22	19·1
12	20·2	June 2	14·5	23	8·8	14	3·3	3	21·8	24	16·4

DIONE.

Greenwich Mean Time of Eastern Elongation.

d	h	d	h	d	h	d	h	d	h	d	h
Jan. 2	5·0	Feb. 12	6·5	Mar. 24	7·4	May 4	8·2	June 14	9·1	July 25	10·5
4	22·7	15	0·2	27	1·1	7	1·9	17	2·8	28	4·3
7	16·4	17	17·9	29	18·8	9	19·6	19	20·5	30	22·0
10	10·1	20	11·6	Apr. 1	12·5	12	13·2	22	14·2	Aug. 2	15·7
13	3·8	23	5·2	4	6·1	15	6·8	25	7·9	5	9·4
15	21·5	25	22·9	6	23·8	18	0·5	28	1·6	8	3·1
18	15·2	28	16·5	9	17·4	20	18·1	30	19·3	10	20·9
21	8·9	Mar. 2	10·2	12	11·0	23	11·8	July 3	13·0	13	14·6
24	2·6	5	3·8	15	4·7	26	5·4	6	6·7	16	8·3
26	20·3	7	21·5	17	22·4	28	23·1	9	0·3	19	2·0
29	14·0	10	15·1	20	16·0	31	16·8	11	18·0	21	19·7
Feb. 1	7·7	13	8·8	23	9·7	June 3	10·5	14	11·7	24	13·4
4	1·4	16	2·5	26	3·3	6	4·1	17	5·4		
6	19·1	18	20·1	28	20·9	8	21·8	19	23·1		
9	12·8	21	13·8	May 1	14·6	11	15·5	22	16·8		

RHEA.

Greenwich Mean Time of Eastern Elongation.

d	h	d	h	d	h	d	h	d	h	d	h
Jan. 1	11·5	Feb. 11	3·7	Mar. 22	19·0	May 2	9·9	June 12	1·1	July 22	17·0
6	0·0	15	16·1	27	7·3	6	22·2	16	13·5	27	5·5
10	12·5	20	4·5	31	19·6	11	10·5	21	1·9	31	18·0
15	1·0	24	16·8	Apr. 5	8·0	15	22·8	25	14·3	Aug. 5	6·5
19	13·5	29	5·2	9	20·3	20	11·2	30	2·7	9	19·0
24	1·9	Mar. 4	17·6	14	8·6	24	23·6	July 4	15·2	14	7·5
28	14·4	9	5·9	18	20·9	29	11·9	9	3·6	18	20·0
Feb. 2	2·8	13	18·3	23	9·2	June 3	0·3	13	16·1	23	8·6
6	15·2	18	6·6	27	21·5	7	12·7	18	4·6		

550 SATELLITES OF SATURN, 1924.

TITAN.

Greenwich Mean Time of Greatest Elongation.

d	h	d	h	d	h	d	h	d	h	d	h
Jan. 6	5·4 E	Feb. 15	3·9 W	Mar. 25	22·4 E	May 4	16·5 W	June 13	11·0 E	July 23	8·0 W
14	5·8 W	23	2·4 E	Apr. 2	21·6 W	12	15·1 E	21	10·2 W	31	7·8 E
22	4·9 E	Mar. 2	2·2 W	10	20·0 E	20	14·0 W	29	9·5 E	Aug. 8	7·6 W
30	5·0 W	10	0·6 E	18	19·0 W	28	12·9 E	July 7	8·9 W	16	7·5 E
Feb. 7	3·8 E	18	0·1 W	26	17·5 E	June 5	11·8 W	15	8·4 E	24	7·6 W

HYPERION.

Greenwich Mean Time of Greatest Elongation.

d	h	d	h	d	h	d	h	d	h	d	h
Jan. 8	19·4 E	Feb. 20	3·8 E	Apr. 2	9·5 E	May 14	15·2 E	June 26	0·4 E	Aug. 7	14·9 E
18	13·6 W	29	22·4 W	12	3·2 W	24	8·4 W	July 5	18·9 W	17	12·3 W
30	0·0 E	Mar. 12	6·8 E	23	12·0 E	June 4	19·2 E	17	7·0 E		
Feb. 8	18·7 W	22	1·0 W	May 3	5·4 W	14	13·0 W	27	2·9 W		

IAPETUS.

Greenwich Mean Time of Conjunction and Greatest Elongation.

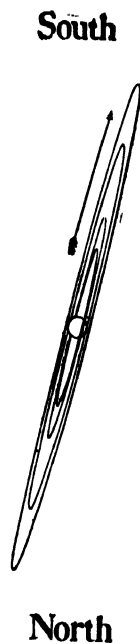
d	h	d	h	d	h	d	h	d	h	d	h
Jan. 13	11·6 E	Feb. 21	0·9 W	Apr. 1	12·6 E	May 9	6·6 W	June 18	20·2 E	July 27	7·6 W
Feb. 1	10·9 I	Mar. 12	17·4 S	20	1·7 I	29	19·8 S	July 7	17·0 I	Aug. 17	10·7 S

RINGS OF SATURN, 1924.

551

ELEMENTS FOR DETERMINING THE GEOCENTRIC POSITION, APPEARANCE, AND MAGNITUDE OF SATURN'S RINGS.

Greenwich Mean Midnight.		<i>a</i>	<i>b</i>	<i>P</i>	<i>B</i>	<i>U</i>	<i>ω</i>	<i>B'</i>	<i>U'</i>	Stellar Mag.
Jan.	5	37 ^h 66	+10 ^m 63	-0 55 ^s 2	+16 23 ^s 5	82 20 ^s 8	42 11 ^s 4	+14 15 ^s 6	34 50 ^s 3	+0.9
	13	38 ^h 16	10 ^m 85	0 52 ^s 1	16 31 ^s 1	82 46 ^s 8	42 11 ^s 4	14 21 ^s 6	35 5 ^s 0	0.8
	21	38 ^h 69	11 ^m 06	0 49 ^s 7	16 36 ^s 2	83 6 ^s 8	42 11 ^s 4	14 27 ^s 5	35 19 ^s 7	0.8
	29	39 ^h 22	11 ^m 24	0 48 ^s 1	16 39 ^s 1	83 20 ^s 7	42 11 ^s 3	14 33 ^s 4	35 34 ^s 4	0.8
Feb.	6	39 ^h 76	11 ^m 40	0 47 ^s 2	16 39 ^s 6	83 28 ^s 0	42 11 ^s 3	14 39 ^s 3	35 49 ^s 1	0.7
	14	40 ^h 30	+11 ^m 53	-0 47 ^s 1	+16 37 ^s 7	83 28 ^s 7	42 11 ^s 2	+14 45 ^s 3	36 3 ^s 9	+0.7
	22	40 ^h 83	11 ^m 63	0 47 ^s 8	16 33 ^s 5	83 23 ^s 0	42 11 ^s 2	14 51 ^s 2	36 18 ^s 6	0.7
Mar.	1	41 ^h 32	11 ^m 70	0 49 ^s 2	16 26 ^s 9	83 11 ^s 0	42 11 ^s 2	14 57 ^s 2	36 33 ^s 3	0.6
	9	41 ^h 75	11 ^m 74	0 51 ^s 3	16 18 ^s 5	82 52 ^s 9	42 11 ^s 2	15 3 ^s 1	36 48 ^s 0	0.6
	17	42 ^h 14	11 ^m 71	0 54 ^s 1	16 8 ^s 4	82 29 ^s 6	42 11 ^s 1	15 8 ^s 9	37 2 ^s 8	0.5
	25	42 ^h 45	+11 ^m 66	-0 57 ^s 4	+15 56 ^s 9	82 1 ^s 8	42 11 ^s 0	+15 14 ^s 8	37 17 ^s 6	+0.5
Apr.	2	42 ^h 68	11 ^m 58	1 1 ^s 1	15 44 ^s 3	81 30 ^s 5	42 11 ^s 0	15 20 ^s 6	37 32 ^s 3	0.4
	10	42 ^h 84	11 ^m 46	1 5 ^s 0	15 30 ^s 9	80 56 ^s 7	42 11 ^s 0	15 26 ^s 4	37 47 ^s 1	0.4
	18	42 ^h 88	11 ^m 31	1 9 ^s 1	15 17 ^s 2	80 21 ^s 6	42 11 ^s 0	15 32 ^s 2	38 1 ^s 8	0.4
	26	42 ^h 84	11 ^m 15	1 13 ^s 3	15 3 ^s 8	79 46 ^s 4	42 10 ^s 9	15 37 ^s 9	38 16 ^s 6	0.4
May	4	42 ^h 71	+10 ^m 95	-1 17 ^s 3	+14 51 ^s 2	79 12 ^s 2	42 10 ^s 9	+15 43 ^s 6	38 31 ^s 4	+0.5
	12	42 ^h 49	10 ^m 75	1 21 ^s 0	14 39 ^s 6	78 40 ^s 3	42 10 ^s 8	15 49 ^s 3	38 46 ^s 2	0.5
	20	42 ^h 18	10 ^m 55	1 24 ^s 4	14 29 ^s 4	78 11 ^s 5	42 10 ^s 8	15 55 ^s 0	39 1 ^s 0	0.6
	28	41 ^h 80	10 ^m 36	1 27 ^s 2	14 21 ^s 1	77 46 ^s 7	42 10 ^s 7	16 0 ^s 7	39 15 ^s 8	0.6
June	5	41 ^h 37	10 ^m 18	1 29 ^s 5	14 14 ^s 9	77 26 ^s 6	42 10 ^s 7	16 6 ^s 4	39 30 ^s 6	0.7
	13	40 ^h 90	+10 ^m 02	-1 31 ^s 3	+14 11 ^s 0	77 11 ^s 9	42 10 ^s 7	+16 12 ^s 1	39 45 ^s 5	+0.7
	21	40 ^h 39	9 ^m 88	1 32 ^s 3	14 9 ^s 7	77 2 ^s 9	42 10 ^s 6	16 17 ^s 7	40 0 ^s 3	0.8
July	29	39 ^h 86	9 ^m 76	1 32 ^s 6	14 10 ^s 7	76 59 ^s 8	42 10 ^s 6	16 23 ^s 3	40 15 ^s 2	0.8
	7	39 ^h 32	9 ^m 67	1 32 ^s 3	14 14 ^s 1	77 2 ^s 6	42 10 ^s 5	16 28 ^s 9	40 30 ^s 0	0.9
	15	38 ^h 78	9 ^m 60	1 31 ^s 3	14 20 ^s 0	77 11 ^s 6	42 10 ^s 5	16 34 ^s 4	40 44 ^s 8	0.9
	23	38 ^h 26	+ 9 ^m 56	-1 29 ^s 6	+14 28 ^s 3	77 26 ^s 3	42 10 ^s 4	+16 40 ^s 0	40 59 ^s 7	+0.9
Aug.	31	37 ^h 76	9 ^m 54	1 27 ^s 3	14 38 ^s 7	77 46 ^s 7	42 10 ^s 4	16 45 ^s 4	41 14 ^s 6	0.9
	8	37 ^h 28	9 ^m 55	1 24 ^s 3	14 51 ^s 0	78 12 ^s 4	42 10 ^s 4	16 50 ^s 9	41 29 ^s 5	0.9
	16	36 ^h 83	9 ^m 58	1 20 ^s 9	15 5 ^s 2	78 43 ^s 3	42 10 ^s 3	16 56 ^s 4	41 44 ^s 4	1.0
	24	36 ^h 42	9 ^m 64	1 16 ^s 6	15 21 ^s 0	79 18 ^s 8	42 10 ^s 3	17 1 ^s 9	41 59 ^s 3	1.0
Sept.	1	36 ^h 05	+ 9 ^m 72	-1 11 ^s 9	+15 38 ^s 1	79 58 ^s 6	42 10 ^s 3	+17 7 ^s 3	42 14 ^s 2	+1.0
	9	35 ^h 72	9 ^m 81	1 6 ^s 8	15 56 ^s 5	80 42 ^s 4	42 10 ^s 2	17 12 ^s 8	42 29 ^s 1	0.9
	17	35 ^h 43	9 ^m 92	1 1 ^s 3	16 15 ^s 6	81 29 ^s 5	42 10 ^s 1	17 18 ^s 2	42 44 ^s 1	0.9
	25	35 ^h 20	10 ^m 05	0 55 ^s 3	16 35 ^s 3	82 19 ^s 6	42 10 ^s 1	17 23 ^s 6	42 59 ^s 0	0.9
Oct.	3	35 ^h 02	10 ^m 19	0 49 ^s 1	16 55 ^s 3	83 12 ^s 1	42 10 ^s 1	17 28 ^s 9	43 14 ^s 0	0.9
	11	34 ^h 89	+10 ^m 35	-0 42 ^s 6	+17 15 ^s 7	84 6 ^s 7	42 10 ^s 0	+17 34 ^s 2	43 28 ^s 9	+0.8
	19	34 ^h 80	10 ^m 52	0 35 ^s 9	17 36 ^s 0	85 2 ^s 6	42 10 ^s 0	17 39 ^s 5	43 43 ^s 9	0.8
Nov.	27	34 ^h 77	10 ^m 71	0 29 ^s 1	17 56 ^s 0	85 59 ^s 5	42 9 ^s 9	17 44 ^s 8	43 58 ^s 8	0.8
	4	34 ^h 79	10 ^m 90	0 22 ^s 2	18 15 ^s 5	86 56 ^s 8	42 9 ^s 9	17 50 ^s 1	44 13 ^s 8	0.8
	12	34 ^h 86	11 ^m 10	0 15 ^s 3	18 34 ^s 4	87 53 ^s 8	42 9 ^s 9	17 55 ^s 4	44 28 ^s 8	0.8
	20	34 ^h 99	+11 ^m 32	-0 8 ^s 5	+18 52 ^s 4	88 50 ^s 0	42 9 ^s 8	+18 0 ^s 7	44 43 ^s 8	+0.8
Dec.	28	35 ^h 17	11 ^m 54	-0 1 ^s 9	19 9 ^s 3	89 44 ^s 9	42 9 ^s 8	18 5 ^s 9	44 58 ^s 8	0.8
	6	35 ^h 40	11 ^m 77	+0 4 ^s 6	19 25 ^s 1	90 37 ^s 6	42 9 ^s 8	18 11 ^s 0	45 13 ^s 8	0.8
	14	35 ^h 68	12 ^m 00	0 10 ^s 7	19 39 ^s 6	91 27 ^s 7	42 9 ^s 8	18 16 ^s 2	45 28 ^s 8	0.8
	22	36 ^h 01	12 ^m 24	0 16 ^s 4	19 52 ^s 4	92 14 ^s 5	42 9 ^s 7	18 21 ^s 4	45 43 ^s 8	0.8
	30	36 ^h 38	+12 ^m 48	+0 21 ^s 6	+20 3 ^s 7	92 57 ^s 3	42 9 ^s 7	+18 26 ^s 5	45 58 ^s 9	+0.8



APPARENT ORBITS OF THE SATELLITES OF URANUS AT DATE OF
OPPOSITION, SEPTEMBER 12, 1924, AS SEEN IN AN INVERTING
TELESCOPE.

APPARENT APSIDES.

Date.	Position Angle.	Apparent Distance.			
		Ariel.	Umbriel.	Titania.	Oberon.
June 4	344°·7	13'·1	18'·2	29'·9	40'·0
Sept. 12	344·8	13·9	19·3	31·7	42·3
Dec. 21	344·9	13·0	18·2	29·8	39·9

In the above diagram the central circle represents the planet.

SATELLITES OF URANUS, 1924. 553

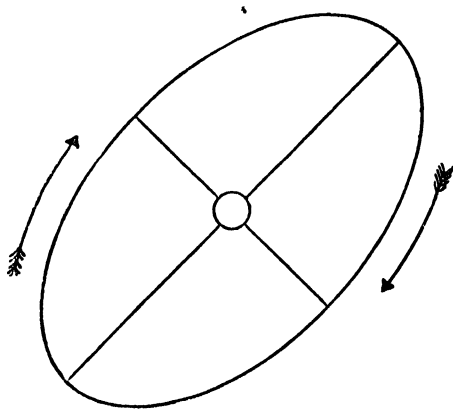
GREENWICH MEAN TIME OF GREATEST ELONGATION.

ARIEL.		UMBRIEL.		TITANIA.		OBERON.
North.	South.	North.	South.	North.	South.	North and South.
d h	d h	d h	d h	d h	d h	d h
June 9 5.6	June 13 0.4	June 1 23.4	June 4 1.1	May 28 7.0	June 1 15.5	June 25 18.5 N.
16 19.1	20 13.8	10 6.3	12 8.0	June 5 23.9	10 8.4	July 2 12.1 S.
24 8.5	28 3.3	18 13.2	20 14.9	14 16.8	19 1.3	9 5.6 N.
July 1 22.0	July 5 16.7	26 20.1	28 21.8	23 9.8	27 18.2	15 23.2 S.
9 11.4	13 6.2	July 5 3.0	July 7 4.7	July 2 2.7	July 6 11.2	22 16.7 N.
17 0.9	20 19.6	13 9.9	15 11.6	10 19.6	15 4.1	29 10.3 S.
24 14.4	28 9.1	21 16.8	23 18.6	19 12.6	23 21.0	Aug. 5 3.9 N.
Aug. 1 3.8	Aug. 4 22.6	29 23.7	Aug. 1 1.5	28 5.5	Aug. 1 14.0	11 21.5 S.
8 17.3	12 12.0	Aug. 7 6.7	9 8.4	Aug. 5 22.4	10 6.9	18 15.1 N.
16 6.8	20 1.5	15 13.6	17 15.3	14 15.4	18 23.9	25 8.6 S.
23 20.2	27 15.0	23 20.5	25 22.2	23 8.4	27 16.8	Sept. 1 2.2 N.
31 9.7	Sept. 4 4.4	Sept. 1 3.4	Sept. 3 5.2	Sept. 1 1.3	Sept. 5 9.8	7 19.8 S.
Sept. 7 23.2	11 17.9	9 10.4	11 12.1	9 18.3	14 2.8	14 13.4 N.
15 12.6	19 7.4	17 17.3	19 19.0	18 11.2	22 19.7	21 7.0 S.
23 2.1	26 20.9	26 0.2	28 2.0	27 4.2	Oct. 1 12.7	28 0.6 N.
30 15.6	Oct. 4 10.3	Oct. 4 7.2	Oct. 6 8.9	Oct. 5 21.2	10 5.7	Oct. 4 18.2 S.
Oct. 8 5.1	11 23.8	12 14.1	14 15.8	14 14.2	18 22.6	11 11.8 N.
15 18.5	19 13.3	20 21.0	22 22.8	23 7.1	27 15.6	18 5.4 S.
23 8.0	27 2.8	29 4.0	31 5.7	Nov. 1 0.1	Nov. 5 8.6	24 23.0 N.
30 21.5	Nov. 3 16.3	Nov. 6 10.9	Nov. 8 12.7	9 17.1	14 1.6	31 16.5 S.
Nov. 7 11.0	11 5.7	14 17.9	16 19.6	18 10.0	22 18.5	Nov. 7 10.1 N.
15 0.5	18 19.2	23 0.8	25 2.5	27 3.0	Dec. 1 11.5	14 3.7 S.
22 14.0	26 8.7	Dec. 1 7.7	Dec. 3 9.5	Dec. 5 20.0	10 4.4	20 21.3 N.
30 3.4	Dec. 3 22.2	9 14.7	11 16.4	14 12.9	18 21.4	27 14.9 S.
Dec. 7 16.9	11 11.7	17 21.6	19 23.3	23 5.8	27 14.3	Dec. 4 8.4 N.

For Ariel every third greatest elongation is given, and for Umbriel every alternate one; the intermediate ones may be found by adding multiples of the period of the satellite.

	d h
Sidereal period of Ariel	2 12.489
Sidereal period of Umbriel	4 3.460
Sidereal period of Titania	8 16.941
Sidereal period of Oberon	13 11.118

South



North

APPARENT ORBIT OF THE SATELLITE OF NEPTUNE AT DATE OF OPPOSITION, FEB. 8, 1924, AS SEEN IN AN INVERTING TELESCOPE.

Date.		Position Angle of Apsis.	Apparent Distance at Apsis.
Feb.	10	135°·4	16"·8
May	10	134°·3	16·2
Oct.	23	138°·3	16·0
Dec.	32	138°·2	16·6

GREENWICH MEAN TIME OF GREATEST ELONGATION.

Jan.			Mar.			May			July			Nov.						
d	h		d	h		d	h		d	h		d	h					
2	3·5	E.	3	21·1	W.	4	14·5	E.	5	7·1	W.	2	16·9	E.				
5	2·0	W.	6	19·7	E.	7	13·1	W.	8	5·6	E.	5	15·4	W.				
8	0·6	E.	9	18·2	W.	10	11·6	E.	...			8	13·9	E.				
10	23·1	W.	12	16·8	E.	13	10·1	W.	Sept.	10	20·2	E.	11	12·4	W.			
13	21·7	E.	15	15·3	W.	16	8·6	E.	13	18·6	W.	14	10·9	E.				
16	20·2	W.	18	13·9	E.	19	7·1	W.	16	17·1	E.	17	9·5	W.				
19	18·8	E.	21	12·4	W.	22	5·6	E.	19	15·6	W.	20	8·0	E.				
22	17·3	W.	24	11·0	E.	25	4·2	W.	22	14·1	E.	23	6·5	W.				
25	15·9	E.	27	9·5	W.	28	2·7	E.	25	12·5	W.	26	5·0	E.				
28	14·4	W.	30	8·1	E.	31	1·2	W.	28	11·0	E.	29	3·5	W.				
31	13·0	E.	Apr.	2	6·6	W.	June	2	23·7	E.	Oct.	1	9·5	W.	Dec.	2	2·0	E.
Feb.	3	11·6	W.	5	5·2	E.	5	22·2	W.	4	8·0	E.	5	0·5	W.			
	6	10·1	E.	8	3·7	W.	8	20·7	E.	7	6·5	W.	7	23·1	E.			
	9	8·7	W.	11	2·3	E.	11	19·2	W.	10	5·0	E.	10	21·6	W.			
	12	7·2	E.	14	0·8	W.	14	17·7	E.	13	3·5	W.	13	20·1	E.			
	15	5·8	W.	16	23·4	E.	17	16·2	W.	16	2·0	E.	16	18·6	W.			
	18	4·4	E.	19	21·9	W.	20	14·7	E.	19	0·4	W.	19	17·2	E.			
	21	2·9	W.	22	20·4	E.	23	13·2	W.	21	22·9	E.	22	15·7	W.			
	24	1·5	E.	25	19·0	W.	26	11·7	E.	24	21·4	W.	25	14·3	E.			
	27	0·0	W.	28	17·5	E.	29	10·2	W.	27	19·9	E.	28	12·8	W.			
	29	22·6	E.	May	1	16·0	W.	July	2	8·6	E.	30	18·4	W.	31	11·3	E.	

In the above diagram the central circle represents the planet.
The sidereal period of the satellite of Neptune is 5^d 21^h 04^m.

	d	h	m				d	h	m			
Jan.	1	14		Earth in Perihelion.			Apr.	5	14		♂ Stationary.	
	2	3	53	♂ ♂ ☾ - - ♂ 4 22 S.				7	17	22	♀ ♂ ☾ - - ♀ 8 2 N.	
	2	8		♀ in ♀.				13	5		♂ ☐ ☉	
	3	7		♀ Stationary.				14	0	34	♂ ♂ ☾ - - ♀ 1 28 N.	
	3	12	49	♂ ♂ ☾ - - ♀ 4 28 S.				14	5		♀ greatest Hel. Lat. N.	
	6	22	50	♀ ♂ ☾ - - ♀ 1 33 S.				16	15		♀ at greatest elong. 19 52 E.	
	6	23		♀ in Perihelion.				18	21		♂ ♂ ☉	
	8	8	25	♀ ♂ ☾ - - ♀ 3 14 S.				19	0	53	♂ ♂ ☾ - - ♀ 1 39 S.	
	10	8	49	♂ ♂ ☾ - - ♀ 0 18 N.				21	5		♀ greatest Hel. Lat. N.	
	12	16		♀ Inf. ♂ ☉				21	15		♀ at greatest elong. 45 40 E.	
	17	5		♀ greatest Hel. Lat. N.				22	9	47	♂ ♂ ☾ - - ♀ 4 5 S.	
	22	19		♂ ☐ ☉				25	9	13	♂ ♂ ☾ - - ♂ 3 50 S.	
	23	0	28	♂ ♂ ☾ - - ♀ 1 27 N.				27	3		♀ Stationary.	
	23	21		♀ Stationary.				28	2		♀ Stationary.	
	28	6	38	♂ ♂ ☾ - - ♀ 2 6 S.				29	2	0	♂ ♂ ☾ - - ♀ 1 4 N.	
	30	17	50	♂ ♂ ☾ - - ♂ 4 52 S.			May	3	19	53	♀ ♂ ☾ - - ♀ 6 13 N.	
	31	5	15	♂ ♂ ☾ - - ♀ 4 30 S.				7	13		♀ Inf. ♂ ☉	
	31	13	29	♀ ♂ ♀ - - ♀ 0 33 S.				7	13	0	♀ ♂ ☾ - - ♀ 7 55 N.	
Feb.	2	15	23	♀ ♂ ☾ - - ♀ 2 31 S.				7	13	41	[visible at Greenwich. ♀ Transit across ☉'s disc, partly	
	5	2		♀ at greatest elong. 25 30 W.				7	16		♀ in ♀	
	6	20	40	♂ ♂ ☾ - - ♀ 0 32 N.				8	0		♂ ☐ ☉	
	7	10	55	♀ ♂ ☾ - - ♀ 1 1 N.				11	8	24	♂ ♂ ☾ - - ♀ 1 13 N.	
	8	13		♀ ♂ ☉				16	8	28	♂ ♂ ☾ - - ♀ 1 40 S.	
	9	16		♀ in ♀				17	22		♀ in Aphelion.	
	11	11		♂ Stationary.				19	15	46	♂ ♂ ☾ - - ♀ 4 3 S.	
	13	4	52	♂ ♂ ♀ - - ♂ 0 26 S.				19	20		♀ Stationary.	
	19	7	24	♂ ♂ ☾ - - ♀ 1 32 N.				23	20	19	♂ ♂ ☾ - - ♂ 3 25 S.	
	19	22		♀ in Aphelion.				24	18		♀ at greatest brilliancy.	
	20	4	9	☾ eclipsed, partly vis. at G ^h				26	9	13	♂ ♂ ☾ - - ♀ 1 23 N.	
	24	12	15	♂ ♂ ☾ - - ♀ 2 2 S.				30	21	53	♀ ♂ ☾ - - ♀ 1 15 N.	
	25	17		♀ in ♀			June	3	8		♀ at greatest elong. 24 15 W.	
	27	17	38	♂ ♂ ☾ - - ♀ 4 26 S.				5	3	22	♀ ♂ ☾ - - ♀ 5 6 N.	
	28	7	22	♂ ♂ ☾ - - ♂ 4 49 S.				5	13		♂ ♂ ☉	
Mar.	1	12		♂ in ♀				7	6		♀ greatest Hel. Lat. S.	
	4	0	7	♀ ♂ ☾ - - ♀ 2 33 S.				7	15	20	♂ ♂ ☾ - - ♀ 0 56 N.	
	5	3	44	☉ eclipsed, invis. at Green ^h .				8	23		♀ Stationary.	
	5	8	11	♂ ♂ ☾ - - ♀ 0 41 N.				12	6		♂ ☐ ☉	
	7	20		♂ ♂ ☉				12	15	53	♂ ♂ ☾ - - ♀ 1 54 S.	
	8	13	48	♀ ♂ ☾ - - ♀ 5 27 N.				15	21	6	♂ ♂ ☾ - - ♀ 4 11 S.	
	9	2		♂ ☐ ☉				16	6		♀ in ♀	
	11	7		♀ greatest Hel. Lat. S.				21	3	16	♂ ♂ ☾ - - ♂ 3 37 S.	
	14	13	51	♀ ♂ ♀ - - ♀ 1 21 S.				21	5	0	☉ enters Sign ♊, Solstice.	
	17	15	52	♂ ♂ ☾ - - ♀ 1 34 N.				22	16	44	♂ ♂ ☾ - - ♀ 1 38 N.	
	20	9	20	☉ enters Sign ♋, Equinox				26	7		♀ in ♀	
	21	22		♀ Sup. ♂ ☉				26	8		♂ Stationary.	
	22	17	59	♂ ♂ ☾ - - ♀ 1 49 S.				29	14		♂ Stationary.	
	26	2	42	♂ ♂ ☾ - - ♀ 4 16 S.				30	21		♀ in Perihelion.	
	27	20	34	♂ ♂ ☾ - - ♂ 4 24 S.			July	1	0		♀ Inf. ♂ ☉	
	30	5		♀ in Perihelion.				1	7	33	♀ ♂ ☾ - - ♀ 4 43 N.	
	30	7		♀ in ♀				1	15	27	♀ ♂ ☾ - - ♀ 0 6 N.	
Apr.	1	17	59	♂ ♂ ☾ - - ♀ 0 50 N.				3	1		Earth in Aphelion.	
	3	22		♀ in Perihelion.				4	22	9	♂ ♂ ☾ - - ♀ 0 43 N.	
	4	21	5	♀ ♂ ☾ - - ♀ 5 42 N.				5	6		♀ Sup. ♂ ☉	

	d	h	m		d	h	m		d	h	m	
July	9	22	54	$\text{h} \odot \text{C} - - \text{h} 2 12 \text{ S.}$	Sept. 29	20	53	$\text{q} \odot \Psi - - \text{q} \odot 56 \text{ S.}$				
	11	4		$\text{q} \text{ greatest Hel. Lat. N.}$		30	3 28	$\text{h} \odot \text{C} - - \text{h} 2 43 \text{ S.}$				
	13	2	17	$\text{u} \odot \text{C} - - \text{u} 4 27 \text{ S.}$	Oct. 3	3	36	$\text{u} \odot \text{C} - - \text{u} 4 27 \text{ S.}$				
	18	10		$\text{h} \square \odot$		7	3	$\text{q} \text{ greatest Hel. Lat. N.}$				
	19	0	34	$\text{f} \odot \text{C} - - \text{f} 4 44 \text{ S.}$		7	10	$\text{q} \text{ in } \Omega$				
	20	0	57	$\text{H} \odot \text{C} - - \text{H} 1 46 \text{ N.}$		8	11 7	$\text{f} \odot \text{C} - - \text{f} 3 28 \text{ S.}$				
	20	18		$\text{q} \text{ in Aphelion.}$		9	22 17	$\text{H} \odot \text{C} - - \text{H} 1 34 \text{ N.}$				
	22	16		$\text{q} \text{ Stationary.}$		22	12 1	$\text{u} \odot \text{C} - - \text{u} 0 8 \text{ N.}$				
	23	8	48	$\text{q} \odot \Psi - - \text{q} 1 10 \text{ N.}$		24	14 6	$\text{q} \odot \text{C} - - \text{q} 1 28 \text{ S.}$				
	25	16		$\text{f} \text{ Stationary.}$		25	15	$\text{q} \text{ Sup. } \odot \odot$				
	28	7	29	$\text{q} \odot \text{C} - - \text{q} 1 45 \text{ S.}$		27	15 16	$\text{q} \odot \text{h} - - \text{q} 1 59 \text{ S.}$				
	31	7	58	$\odot \text{eclipsed, invis. at Green}^{\text{h}}.$		27	18 15	$\text{h} \odot \text{C} - - \text{h} 2 47 \text{ S.}$				
Aug.	1	5	57	$\text{u} \odot \text{C} - - \text{u} 0 35 \text{ N.}$		27	18 36	$\text{q} \odot \text{C} - - \text{q} 4 47 \text{ S.}$				
	2	9	9	$\text{q} \odot \text{C} - - \text{q} 0 55 \text{ S.}$		28	9	$\text{h} \odot \odot$				
	3	15		$\text{q} \text{ in } \text{U}$		30	14	$\text{q} \text{ in } \text{U}$				
	5	9		$\text{f} \text{ greatest Hel. Lat. S.}$		30	19 9	$\text{u} \odot \text{C} - - \text{u} 4 7 \text{ S.}$				
	6	6	19	$\text{h} \odot \text{C} - - \text{h} 2 29 \text{ S.}$	Nov.	5	7 51	$\text{f} \odot \text{C} - - \text{f} 0 33 \text{ S.}$				
	6	18		$\text{u} \text{ Stationary.}$		6	2 43	$\text{H} \odot \text{C} - - \text{H} 1 42 \text{ N.}$				
	6	23		$\text{q} \text{ at greatest brilliancy.}$		9	20	$\text{q} \text{ in Aphelion.}$				
	9	8	13	$\text{u} \odot \text{C} - - \text{u} 4 38 \text{ S.}$		10	3	$\text{q} \text{ in Perihelion.}$				
	12	3		$\text{q} \text{ greatest Hel. Lat. S.}$		14	17	$\text{u} \square \odot$				
	12	16		$\text{u} \odot \odot$		18	20 42	$\text{u} \odot \text{C} - - \text{u} 0 10 \text{ S.}$				
	13	21		$\text{q} \text{ in Aphelion.}$		23	13 34	$\text{q} \odot \text{C} - - \text{q} 2 56 \text{ S.}$				
	14	8	20	$\odot \text{eclipsed, partly vis. at Gh.}$		24	10 29	$\text{h} \odot \text{C} - - \text{h} 2 53 \text{ S.}$				
	14	22		$\text{q} \text{ at greatest elong. } 27 26 \text{ E.}$		24	20	$\text{u} \text{ Stationary.}$				
	15	6	20	$\text{f} \odot \text{C} - - \text{f} 6 8 \text{ S.}$		27	1	$\text{H} \text{ Stationary.}$				
	16	9	16	$\text{H} \odot \text{C} - - \text{H} 1 44 \text{ N.}$		27	3 42	$\text{f} \odot \text{H} - - \text{f} 0 16 \text{ S.}$				
	23	5		$\text{f} \odot \odot$		27	10 19	$\text{u} \odot \text{C} - - \text{u} 6 26 \text{ S.}$				
	25	23	28	$\text{q} \odot \text{C} - - \text{q} 0 50 \text{ S.}$		27	14 32	$\text{u} \odot \text{C} - - \text{u} 3 43 \text{ S.}$				
	28	1		$\text{q} \text{ Stationary.}$		29	12 42	$\text{q} \odot \text{u} - - \text{q} 2 36 \text{ S.}$				
	28	15	15	$\text{u} \odot \text{C} - - \text{u} 0 30 \text{ N.}$		30	5	$\text{q} \text{ greatest Hel. Lat. S.}$				
	29	20	23	$\odot \text{eclipsed, invis at Green}^{\text{h}}.$	Dec.	1	22	$\text{q} \text{ greatest Hel. Lat. N.}$				
	30	4		$\text{f} \text{ in Perihelion.}$		3	7 51	$\text{H} \odot \text{C} - - \text{H} 1 59 \text{ N.}$				
	31	3	13	$\text{q} \odot \text{C} - - \text{q} 7 35 \text{ S.}$		3	13 57	$\text{f} \odot \text{C} - - \text{f} 2 14 \text{ N.}$				
Sept.	2	15	29	$\text{h} \odot \text{C} - - \text{h} 2 38 \text{ S.}$		4	20 20	$\text{q} \odot \text{h} - - \text{q} 0 23 \text{ S.}$				
	3	5		$\text{q} \text{ greatest Hel. Lat. S.}$		9	5	$\text{q} \text{ at greatest elong. } 20 49 \text{ E.}$				
	3	13		$\text{u} \square \odot$		9	12	$\text{H} \square \odot$				
	5	16	13	$\text{u} \odot \text{C} - - \text{u} 4 39 \text{ S.}$		16	3 0	$\text{u} \odot \text{C} - - \text{u} 0 23 \text{ S.}$				
	9	18		$\text{q} \text{ at greatest elong. } 46 0 \text{ W.}$		17	9	$\text{q} \text{ Stationary.}$				
	11	1		$\text{q} \text{ Inf. } \odot \odot$		19	5	$\text{q} \text{ in } \Omega$				
	11	3	55	$\text{f} \odot \text{C} - - \text{f} 5 46 \text{ S.}$		21	14 46	$\odot \text{ enters Sign } \text{V} \text{, Solstice.}$				
	12	2		$\text{H} \odot \odot$		22	1 48	$\text{h} \odot \text{C} - - \text{h} 3 1 \text{ S.}$				
	12	16	38	$\text{H} \odot \text{C} - - \text{H} 1 37 \text{ N.}$		22	18	$\text{u} \odot \odot$				
	19	12		$\text{q} \text{ Stationary.}$		23	13 14	$\text{q} \odot \text{C} - - \text{q} 3 33 \text{ S.}$				
	22	6		$\text{q} \text{ in } \Omega$		23	20	$\text{q} \text{ in Perihelion.}$				
	22	20	0	$\odot \text{ enters Sign } \text{=, Equinox.}$		25	11	$\text{f} \square \odot$				
	24	1		$\text{f} \text{ Stationary.}$		25	12 9	$\text{u} \odot \text{C} - - \text{u} 3 20 \text{ S.}$				
	24	15	23	$\text{q} \odot \text{C} - - \text{q} 0 31 \text{ S.}$		25	20 2	$\text{q} \odot \text{C} - - \text{q} 1 2 \text{ S.}$				
	25	1	42	$\text{u} \odot \text{C} - - \text{u} 0 22 \text{ N.}$		26	21	$\text{q} \text{ Inf. } \odot \odot$				
	26	10		$\text{q} \text{ in Perihelion.}$		28	22 26	$\text{q} \odot \text{u} - - \text{q} 2 41 \text{ N.}$				
	26	21		$\text{q} \text{ at greatest elong. } 17 52 \text{ W.}$		30	15 55	$\text{H} \odot \text{C} - - \text{H} 2 16 \text{ N.}$				
	26	21	46	$\text{q} \odot \text{C} - - \text{q} 1 2 \text{ S.}$		30	17	$\text{f} \text{ in } \Omega$				

EPHEMERIS FOR PHYSICAL OBSERVATIONS OF THE SUN.

Noon.		P	B ₀	L ₀	Noon.		P	B ₀	L ₀
Jan.	1	+ 2.34	- 3.07	266.64	July	4	- 1.20	+ 3.34	344.90
	6	- 0.09	3.64	200.79		9	+ 1.07	3.86	278.72
	11	2.51	4.18	134.95		14	3.32	4.36	212.55
	16	4.89	4.69	69.11		19	5.54	4.82	146.39
	21	7.21	5.16	3.28		24	7.69	5.26	80.24
	26	- 9.44	- 5.59	297.44		29	+ 9.78	+ 5.66	14.10
Feb.	31	11.58	5.98	231.61	Aug.	3	11.78	6.02	307.98
	5	13.61	6.32	165.78		8	13.69	6.33	241.86
	10	15.52	6.61	99.95		13	15.49	6.61	175.76
	15	17.29	6.85	34.11		18	17.18	6.83	109.67
	20	- 18.92	- 7.03	328.27		23	+ 18.75	+ 7.01	43.60
Mar.	25	20.41	7.16	262.41		28	20.19	7.14	337.54
	1	21.74	7.23	196.55	Sept.	2	21.50	7.22	271.49
	6	22.91	7.25	130.68		7	22.67	7.25	205.46
	11	23.92	7.21	64.80		12	23.69	7.23	139.44
	16	- 24.77	- 7.12	358.90		17	+ 24.56	+ 7.15	73.43
	21	25.44	6.97	292.98		22	25.27	7.02	7.43
	26	25.94	6.77	227.04		27	25.81	6.84	301.44
Apr.	31	26.26	6.52	161.09	Oct.	2	26.19	6.60	235.46
	5	26.41	6.23	95.12		7	26.38	6.32	169.50
	10	- 26.37	- 5.89	29.12		12	+ 26.40	+ 5.99	103.54
	15	26.15	5.50	323.11		17	26.23	5.62	37.58
	20	25.74	5.08	257.07		22	25.87	5.20	331.63
	25	25.15	4.62	191.01		27	25.31	4.74	265.70
	30	24.38	4.13	124.94	Nov.	1	24.56	4.25	199.77
May	5	- 23.42	- 3.62	58.85		6	+ 23.61	+ 3.72	133.84
	10	22.29	3.08	352.74		11	22.46	3.16	67.92
	15	20.99	2.52	286.61		16	21.12	2.57	2.01
	20	19.52	1.94	220.47		21	19.60	1.97	296.10
	25	17.90	1.35	154.32		26	17.90	1.35	230.20
	30	- 16.14	- 0.75	88.16	Dec.	1	+ 16.03	+ 0.71	164.31
June	4	14.25	- 0.14	21.99		6	14.02	+ 0.07	98.42
	9	12.24	+ 0.46	315.81		11	11.88	- 0.57	32.54
	14	10.14	1.06	249.63		16	9.62	1.20	326.66
	19	7.97	1.65	183.44		21	7.29	1.83	260.79
	24	- 5.75	+ 2.23	117.26		26	+ 4.89	- 2.45	194.93
	29	- 3.48	+ 2.80	51.07		31	+ 2.46	- 3.04	129.08

MEAN EQUATOR, ORBIT, AND MEAN LONGITUDE.

Noon	Mean Equator.			Orbit		Mean Longitude. (	Mean Solar Days.	Motion in Mean Longitude.
	<i>i</i>	Δ	Ω'	Γ'	Ω			
Jan. 1	24 50.7	336 23.8	—1 32.7	230 53.8	154 59.4	214 43.8	0.1	1 19.06
11	24 50.4	335 53.7	1 34.5	232 0.7	154 27.6	346 29.7	0.2	2 38.12
21	24 50.1	335 23.6	1 36.4	233 7.5	153 55.8	118 15.5	0.3	3 57.18
31	24 49.7	334 53.6	1 38.2	234 14.4	153 24.0	250 1.3	0.4	5 16.23
Feb. 10	24 49.3	334 23.5	1 40.0	235 21.2	152 52.3	21 47.2	0.5	6 35.29
							0.6	7 54.35
20	24 49.0	333 53.4	—1 41.9	236 28.0	152 20.5	153 33.0	0.7	9 13.41
Mar. 1	24 48.6	333 23.2	1 43.7	237 34.9	151 48.7	285 18.9	0.8	10 32.47
11	24 48.2	332 53.1	1 45.5	238 41.7	151 17.0	57 4.7	0.9	11 51.53
21	24 47.8	332 23.0	1 47.3	239 48.6	150 45.2	188 50.5	1.0	13 10.58
31	24 47.4	331 52.8	1 49.1	240 55.4	150 13.4	320 36.4	2.0	26 21.17
							3.0	39 31.75
Apr. 10	24 47.0	331 22.7	—1 50.9	242 2.3	149 41.6	92 22.2	4.0	52 42.33
20	24 46.6	330 52.5	1 52.7	243 9.1	149 9.9	224 8.0	5.0	65 52.92
30	24 46.2	330 22.4	1 54.4	244 15.9	148 38.1	355 53.9	6.0	79 3.50
May 10	24 45.8	329 52.2	1 56.2	245 22.8	148 6.3	127 39.7	7.0	92 14.09
20	24 45.3	329 22.1	1 57.9	246 29.6	147 34.5	259 25.6	8.0	105 24.67
							9.0	118 35.25
30	24 44.9	328 51.9	—1 59.7	247 36.5	147 2.8	31 11.4	10.0	131 45.84
June 9	24 44.4	328 21.7	2 1.4	248 43.3	146 31.0	162 57.2		
19	24 44.0	327 51.5	2 3.1	249 50.1	145 59.2	294 43.1		
29	24 43.5	327 21.3	2 4.9	250 57.0	145 27.5	66 28.9	Hrs.	
July 9	24 43.1	326 51.1	2 6.6	252 3.8	144 55.7	198 14.8	1	0 32.94
							2	1 5.88
19	24 42.6	326 20.9	—2 8.3	253 10.7	144 23.9	330 0.6	3	1 38.82
29	24 42.1	325 50.7	2 10.0	254 17.5	143 52.1	101 46.4	4	2 11.76
Aug. 8	24 41.7	325 20.4	2 11.7	255 24.4	143 20.4	233 32.3	5	2 44.70
18	24 41.2	324 50.2	2 13.3	256 31.2	142 48.6	5 18.1	6	3 17.65
28	24 40.7	324 19.9	2 15.0	257 38.0	142 16.8	137 3.9	7	3 50.59
							8	4 23.53
Sept. 7	24 40.2	323 49.7	—2 16.6	258 44.9	141 45.1	268 49.8	9	4 56.47
17	24 39.7	323 19.4	2 18.3	259 51.7	141 13.3	40 35.6	10	5 29.41
27	24 39.2	322 49.1	2 19.9	260 58.6	140 41.5	172 21.5	11	6 2.35
Oct. 7	24 38.7	322 18.8	2 21.5	262 5.4	140 9.7	304 7.3	12	6 35.29
17	24 38.1	321 48.5	2 23.1	263 12.3	139 38.0	75 53.1	13	7 8.23
							14	7 41.17
27	24 37.6	321 18.2	—2 24.7	264 19.1	139 6.2	207 39.0	15	8 14.11
Nov. 6	24 37.1	320 47.8	2 26.3	265 25.9	138 34.4	339 24.8	16	8 47.06
16	24 36.5	320 17.5	2 27.9	266 32.8	138 2.6	111 10.6	17	9 20.00
26	24 36.0	319 47.2	2 29.5	267 39.6	137 30.9	242 56.5	18	9 52.94
Dec. 6	24 35.4	319 16.8	2 31.0	268 46.5	136 59.1	14 42.3	19	10 25.88
							20	10 58.82
16	24 34.9	318 46.5	—2 32.6	269 53.3	136 27.3	146 28.2	21	11 31.76
26	24 34.3	318 16.1	2 34.1	271 0.2	135 55.6	278 14.0	22	12 4.70
36	24 33.7	317 45.8	—2 35.6	272 7.0	135 23.8	49 59.8	23	12 37.64

Daily motion of Γ' +6'.684
 Daily motion of Ω —3'.177

EPHEMERIS FOR PHYSICAL OBSERVATIONS OF THE MOON.

Mid-night.	The Earth's Selenographic—		Physical Libration.		The Sun's Selenographic—		C	Illuminated Limbs at Transit at Greenwich, with Corrections to Defective Limbs when Observable.			
	Long.	Lat.	Long.	Lat.	Colong.	Lat.		R.A.	s	Dec.	
Jan. 1	-3°22	-5°95	0°00	+0°04	210°86	+1°22	19°20	II.		S.	"
2	1°77	6°48	0°00	0°04	223°04	1°19	14°67				
3	-0°13	6°59	0°00	0°04	235°22	1°17	9°05				
4	+1°57	6°26	0°00	0°04	247°40	1°15	2°72				
5	3°19	5°51	0°00	0°04	259°59	1°14	356°17				
6	4°59	4°40	0°00	0°04	271°78	1°12	349°95				
7	5°64	3°04	0°00	0°04	283°97	1°10	344°55				
8	6°27	-1°53	0°00	0°04	296°16	1°09	340°29				
9	6°46	+0°03	0°00	0°04	308°34	1°08	337°31				
10	6°23	1°54	0°00	0°04	320°52	1°07	335°61	I.		S.	
11	5°63	2°93	0°00	0°04	332°70	1°06	335°14	I.		S.	
12	4°73	4°16	0°00	0°04	344°86	1°05	335°77	I.		S.	
13	3°62	5°18	0°00	0°04	357°02	1°04	337°42	I.		S.	
14	2°37	5°96	0°00	0°04	9°18	1°03	340°00	I.		S.	
15	+1°07	6°48	0°00	0°04	21°33	1°01	343°40	I.		S.	
16	-0°21	6°73	-0°01	0°04	33°48	1°00	347°53	I.		S.	
17	1°40	6°69	0°01	0°04	45°62	0°98	352°28	I.		S.	
18	2°45	6°36	0°01	0°04	57°75	0°96	357°49	I.		S.	
19	3°34	5°73	0°01	0°04	69°89	0°94	2°93	I.		S.	
20	4°05	4°82	0°01	0°04	82°02	0°92	8°33	I.		S.	0°89
21	4°55	3°66	0°01	0°04	94°14	0°89	13°39	I.	0°01	S.	
22	4°85	2°30	0°01	0°04	106°27	0°86	17°80	II.		S.	
23	4°95	+0°79	0°01	0°04	118°40	0°82	21°30	II.		S.	
24	4°86	-0°78	0°01	0°04	130°54	0°79	23°67	II.		S.	
25	4°57	2°33	0°01	0°04	142°68	0°75	24°78	II.		S.	
26	4°08	3°77	0°01	0°04	154°82	0°72	24°56	II.		S.	
27	3°41	5°00	0°01	0°04	166°97	0°68	22°98	II.		S.	
28	2°55	5°95	0°01	0°04	179°12	0°65	20°09	II.		S.	
29	1°53	6°54	0°01	0°04	191°28	0°61	15°97	II.		S.	
30	-0°38	6°74	0°01	0°04	203°45	0°58	10°80	II.		S.	
31	+0°83	6°52	0°01	0°04	215°63	0°55	4°85	II.		S.	
Feb. 1	2°04	5°88	0°01	0°04	227°82	0°52	358°52				
2	3°15	4°88	0°01	0°04	240°00	0°49	352°29				
3	4°09	3°59	0°01	0°04	252°20	0°46	346°62				
4	4°78	2°10	0°01	0°04	264°39	0°44	341°90				
5	5°17	-0°52	0°01	0°04	276°59	0°41	338°38				
6	5°22	+1°06	0°01	0°04	288°78	0°39	336°15				
7	4°95	2°54	0°01	0°04	300°97	0°37	335°20				
8	4°37	3°87	0°01	0°04	313°16	0°35	335°43	I.		S.	
9	3°52	4°99	0°01	0°04	325°34	0°33	336°75	I.		S.	
10	2°47	5°86	0°01	0°04	337°52	0°32	339°04	I.		S.	
11	1°27	6°47	0°01	0°04	349°70	0°30	342°20	I.		S.	
12	+0°01	6°80	0°01	0°04	1°87	0°28	346°11	I.		S.	
13	-1°25	6°84	0°01	0°04	14°03	0°26	350°65	I.		S.	
14	2°43	6°59	0°01	0°04	26°19	0°24	355°68	I.		S.	
15	3°47	6°04	0°02	0°04	38°34	0°22	1°03	I.		S.	
16	4°31	5°21	0°02	0°04	50°49	0°20	6°44	I.		N.	0°01
17	4°89	4°11	0°02	0°04	62°63	0°17	11°65	I.		N.	0°82
18	5°20	2°79	0°02	0°04	74°77	0°14	16°35	I.		N.	1°12
19	5°21	+1°28	0°02	0°04	86°91	0°11	20°23	I.		N.	0°20
20	4°93	-0°32	0°02	0°04	99°04	0°07	23°04	II.	0°18	S.	0°55
21	4°39	1°94	0°02	0°04	111°18	+0°04	24°58	II.		S.	
22	3°62	3°46	0°02	0°04	123°32	0°00	24°74	II.		S.	
23	-2°67	-4°78	-0°02	+0°04	135°47	-0°04	23°48	II.		S.	

EPHEMERIS FOR PHYSICAL OBSERVATIONS OF THE MOON.

Mid- night.	The Earth's Selenographic—		Physical Libration.		The Sun's Selenographic—		C	Illuminated Limbs at Transit at Greenwich, with Corrections to Defective Limbs when Observable.			
	Long.	Lat.	Long.	Lat.	Colong.	Lat.		R.A.	s	Dec.	
Feb. 23	-2°67	-4°78	-0°02	+0°04	135°47	-0°04	23°48	II.		S.	"
24	1°61	5°82	0°02	0°04	147°62	0°08	20°84	II.		S.	
25	-0°49	6°50	0°01	0°04	159°77	0°12	16°95	II.		S.	
26	+0°63	6°78	0°01	0°04	171°94	0°15	12°00	II.		S.	
27	1°68	6°64	0°01	0°04	184°11	0°19	6°26	II.		S.	
28	2°63	6°09	0°01	0°04	196°29	0°22	0°11	II.		S.	
29	3°43	5°19	0°01	0°04	208°47	0°25	353°95	II.		N.	
Mar. 1	4°06	3°99	0°01	0°04	220°66	0°28	348°23				
2	4°50	2°58	0°01	0°04	232°86	0°31	343°31				
3	4°72	-1°04	0°01	0°04	245°06	0°34	339°46				
4	4°72	+0°53	0°01	0°04	257°27	0°37	336°81				
5	4°48	2°04	0°01	0°04	269°47	0°40	335°42				
6	4°01	3°43	0°01	0°04	281°68	0°42	335°23				
7	3°32	4°63	0°01	0°04	293°89	0°44	336°18				
8	2°44	5°59	0°01	0°04	306°09	0°46	338°16				
9	1°38	6°29	0°01	0°04	318°29	0°48	341°05	I.		S.	
10	+0°19	6°70	0°02	0°04	330°49	0°50	344°74	I.		S.	
11	-1°07	6°83	0°02	0°04	342°68	0°52	349°08	I.		S.	
12	2°34	6°66	0°02	0°04	354°87	0°53	353°95	I.		S.	
13	3°55	6°21	0°02	0°04	7°05	0°55	359°16	I.		S.	
14	4°62	5°49	0°02	0°04	19°22	0°57	4°50	I.		N.	0.28
15	5°48	4°50	0°02	0°04	31°39	0°59	9°74	I.		N.	
16	6°06	3°27	0°02	0°04	43°56	0°61	14°60	I.		N.	
17	6°30	1°84	0°02	0°04	55°72	0°64	18°80	I.		N.	
18	6°17	+0°28	0°02	0°04	67°87	0°66	22°05	I.		N.	
19	5°63	-1°34	0°02	0°04	80°03	0°69	24°12	I.		N.	
20	4°72	2°91	0°02	0°04	92°18	0°72	24°83	I.	0.02	N.	0.80
21	3°49	4°33	0°02	0°04	104°33	0°75	24°07	II.		S.	0.68
22	2°04	5°49	0°02	0°04	116°48	0°78	21°82	II.		S.	
23	-0°48	6°29	0°02	0°04	128°64	0°81	18°19	II.		S.	
24	+1°07	6°67	0°02	0°04	140°80	0°84	13°37	II.		S.	
25	2°47	6°61	0°02	0°04	152°97	0°87	7°68	II.		S.	
26	3°66	6°14	0°01	0°04	165°14	0°90	1°49	II.		S.	0.00
27	4°56	5°30	0°01	0°04	177°32	0°92	355°27	II.		N.	
28	5°17	4°17	0°01	0°04	189°51	0°95	349°45	II.		N.	
29	5°49	2°82	0°01	0°04	201°71	0°98	344°38	II.		N.	
30	5°55	-1°34	0°01	0°04	213°92	1°01	340°32				
31	5°37	+0°18	0°01	0°04	226°13	1°03	337°41				
Apr. 1	4°98	1°67	0°01	0°04	238°34	1°06	335°70				
2	4°42	3°06	0°01	0°04	250°56	1°08	335°18				
3	3°69	4°28	0°01	0°04	262°78	1°10	335°80				
4	2°81	5°28	0°01	0°04	275°01	1°12	337°46				
5	1°80	6°03	0°02	0°04	287°23	1°13	340°08				
6	+0°67	6°51	0°02	0°04	299°45	1°15	343°53				
7	-0°55	6°70	0°02	0°04	311°67	1°16	347°70				
8	1°82	6°60	0°02	0°04	323°88	1°17	352°41	I.		S.	
9	3°11	6°22	0°02	0°04	336°09	1°18	357°51	I.		S.	
10	4°36	5°57	0°02	0°04	348°30	1°19	2°79	I.		N.	
11	5°49	4°67	0°02	0°04	0°50	1°20	8°01	I.		N.	
12	6°42	3°54	0°02	0°04	12°69	1°21	12°94	I.		N.	
13	7°07	2°22	0°02	0°04	24°88	1°22	17°31	I.		N.	
14	7°37	+0°76	0°02	0°04	37°07	1°23	20°88	I.		N.	
15	7°23	-0°80	0°02	0°04	49°25	1°25	23°40	I.		N.	
16	-6°63	-2°35	-0°02	+0°04	61°42	-1°26	24°68	I.		N.	

EPHEMERIS FOR PHYSICAL OBSERVATIONS OF THE MOON.

Mid-night.	The Earth's Selenographic—		Physical Libration.		The Sun's Selenographic—		0	Illuminated Limbs at Transit at Greenwich, with Corrections to Defective Limbs when Observable.			
	Long.	Lat.	Long.	Lat.	Colong.	Lat.		R.A.	s	Dec.	
Apr. 16	-6°63	-2°35	-0°02	+0°04	61°42	-1°26	24°68	I.		N.	"
17	5°55	3°80	0°02	0°04	73°59	1°28	24°56	I.		N.	
18	4°05	5°04	0°02	0°04	85°76	1°29	22°93	I.		N.	
19	2°23	5°96	0°02	0°04	97°92	1°31	19°79	II.		N.	0°34
20	-0°25	6°47	0°02	0°04	110°09	1°33	15°29	II.		S.	0°34
21	+1°71	6°53	0°02	0°04	122°26	1°34	9°69	II.		S.	0°67
22	3°47	6°14	0°01	0°04	134°43	1°36	3°41	II.		N.	0°00
23	4°91	5°35	0°01	0°04	146°61	1°37	356°95	II.		N.	
24	5°96	4°25	0°01	0°04	158°80	1°39	350°83	II.		N.	
25	6°58	2°92	0°01	0°04	171°00	1°41	345°46	II.		N.	
26	6°81	-1°46	0°01	0°04	183°20	1°42	341°13	II.		N.	
27	6°68	+0°04	0°01	0°04	195°41	1°44	337°96	II.		N.	
28	6°27	1°51	0°01	0°04	207°63	1°45	336°00	II.		N.	
29	5°63	2°88	0°01	0°04	219°85	1°47	335°22				
30	4°81	4°09	0°01	0°04	232°08	1°48	335°57				
May 1	3°85	5°09	0°01	0°04	244°31	1°49	336°96				
2	2°79	5°86	0°01	0°04	256°55	1°50	339°32				
3	1°64	6°36	0°01	0°04	268°78	1°51	342°55				
4	+0°43	6°58	0°01	0°04	281°02	1°52	346°53				
5	-0°84	6°51	0°01	0°04	293°26	1°52	351°11				
6	2°13	6°16	0°01	0°04	305°49	1°52	356°12				
7	3°43	5°55	0°02	0°04	317°72	1°52	1°36				
8	4°68	4°70	0°02	0°04	329°95	1°52	6°59	I.		N.	
9	5°83	3°63	0°02	0°04	342°17	1°52	11°57	I.		N.	
10	6°80	2°37	0°02	0°04	354°39	1°52	16°05	I.		N.	
11	7°52	+0°98	0°02	0°04	6°61	1°52	19°81	I.		N.	
12	7°90	-0°49	0°02	0°04	18°81	1°51	22°63	I.		N.	
13	7°85	1°99	0°02	0°04	31°01	1°51	24°34	I.		N.	
14	7°31	3°42	0°02	0°04	43°20	1°51	24°77	I.		N.	
15	6°27	4°68	0°01	0°04	55°39	1°51	23°80	I.		N.	
16	4°74	5°68	0°01	0°04	67°58	1°51	21°34	I.		N.	
17	2°82	6°31	0°01	0°04	79°76	1°51	17°43	I.		N.	
18	-0°66	6°50	0°01	0°04	91°94	1°51	12°22	II.	0°06	N.	
19	+1°52	6°22	0°01	0°04	104°12	1°51	6°04	II.		N.	0°65
20	3°54	5°51	0°01	0°04	116°30	1°51	359°40	II.		N.	1°30
21	5°22	4°43	0°01	0°04	128°49	1°51	352°89	II.		N.	
22	6°46	3°08	0°01	0°04	140°68	1°51	347°04	II.		N.	
23	7°23	1°59	0°01	0°04	152°88	1°51	342°23	II.		N.	
24	7°52	-0°06	0°01	0°04	165°08	1°51	338°65	II.		N.	
25	7°39	+1°44	0°00	0°04	177°30	1°51	336°36	II.		N.	
26	6°92	2°82	0°00	0°04	189°52	1°51	335°31	II.		N.	
27	6°18	4°04	0°00	0°04	201°74	1°52	335°41	II.		N.	
28	5°23	5°06	0°00	0°04	213°97	1°52	336°58	II.		N.	
29	4°14	5°83	0°00	0°04	226°21	1°52	338°72				
30	2°95	6°34	0°00	0°04	238°45	1°52	341°73				
31	1°71	6°57	0°00	0°04	250°70	1°52	345°52				
June 1	+0°44	6°52	0°01	0°04	262°94	1°52	349°95				
2	-0°85	6°18	0°01	0°04	275°19	1°51	354°88				
3	2°13	5°58	0°01	0°04	287°44	1°50	0°09				
4	3°38	4°74	0°01	0°04	299°69	1°49	5°35				
5	4°57	3°68	0°01	0°04	311°93	1°48	10°41				
6	5°65	2°44	0°01	0°04	324°17	1°47	15°01	I.		N.	
7	-6°57	+1°07	-0°01	+0°04	336°40	-1°46	18°93	I.		N.	

EPHEMERIS FOR PHYSICAL OBSERVATIONS OF THE MOON.

Mid- night.	The Earth's Selenographic—		Physical Libration.		The Sun's Selenographic—		<i>c</i>	Illuminated Limbs at Transit at Greenwich, with Corrections to Defective Limbs when Observable.			
	Long.	Lat.	Long.	Lat.	Colong.	Lat.		R.A.	s	Dec.	
June 7	-6°57	+1°07	-0°01	+0°04	336°40	-1°46	18°93	I.		N.	"
8	7°27	-0°37	0°01	0°04	348°63	1°44	21°97	I.		N.	
9	7°66	1°83	0°01	0°04	0°86	1°42	23°96	I.		N.	
10	7°67	3°23	0°01	0°04	13°08	1°41	24°77	I.		N.	
11	7°24	4°50	0°01	0°04	25°29	1°39	24°29	I.		N.	
12	6°33	5°53	-0°01	0°04	37°49	1°38	22°45	I.		N.	
13	4°95	6°24	0°00	0°04	49°69	1°36	19°20	I.		N.	
14	3°18	6°56	0°00	0°04	61°89	1°35	14°61	I.		N.	
15	-1°14	6°42	0°00	0°04	74°08	1°33	8°87	I.		N.	
16	+1°00	5°82	0°00	0°04	86°27	1°31	2°37	I.	0°08	N.	
17	3°03	4°81	0°00	0°04	98°45	1°30	355°65	II.		N.	
18	4°79	3°48	0°00	0°04	110°64	1°28	349°33	II.		N.	
19	6°15	1°95	0°00	0°04	122°83	1°26	343°92	II.		N.	
20	7°04	-0°34	0°00	0°04	135°03	1°25	339°75	II.		N.	
21	7°45	+1°24	0°00	0°04	147°24	1°24	336°96	II.		N.	
22	7°42	2°70	0°00	0°04	159°45	1°22	335°50	II.		N.	
23	7°00	3°99	0°00	0°04	171°66	1°21	335°29	II.		N.	
24	6°28	5°06	0°00	0°04	183°89	1°20	336°21	II.		N.	
25	5°32	5°87	0°00	0°04	196°12	1°19	338°13	II.		N.	
26	4°19	6°41	0°00	0°04	208°35	1°18	340°94	II.		N.	
27	2°96	6°67	0°00	0°04	220°59	1°17	344°55				
28	1°68	6°64	0°00	0°04	232°84	1°16	348°83				
29	+0°39	6°33	0°00	0°04	245°09	1°15	353°64				
30	-0°88	5°75	0°00	0°04	257°34	1°14	358°80				
July 1	2°10	4°91	0°00	0°04	269°59	1°13	4°08				
2	3°24	3°85	0°00	0°04	281°84	1°11	9°24				
3	4°29	2°60	0°00	0°04	294°09	1°09	14°00				
4	5°20	+1°22	0°00	0°04	306°34	1°07	18°12				
5	5°94	-0°24	0°00	0°04	318°59	1°05	21°37				
6	6°47	1°71	0°00	0°04	330°83	1°02	23°60	I.		N.	
7	6°74	3°12	0°00	0°04	343°06	1°00	24°68	I.		N.	
8	6°68	4°40	0°00	0°04	355°29	0°97	24°53	I.		N.	
9	6°27	5°47	0°00	0°04	7°52	0°95	23°10	I.		N.	
10	5°48	6°24	0°00	0°04	19°73	0°92	20°37	I.		N.	
11	4°31	6°65	0°00	0°04	31°94	0°89	16°35	I.		N.	
12	2°82	6°63	0°00	0°04	44°14	0°86	11°17	I.		N.	
13	-1°09	6°18	+0°01	0°04	56°34	0°83	5°09	I.		N.	
14	+0°74	5°29	0°01	0°04	68°53	0°80	358°51	I.		N.	1°28
15	2°52	4°05	0°01	0°04	80°72	0°78	351°99	I.		N.	0°27
16	4°11	2°54	0°01	0°04	92°91	0°75	346°12	II.		N.	0°99
17	5°39	-0°89	0°01	0°04	105°10	0°72	341°34	II.		N.	
18	6°28	+0°78	0°01	0°04	117°30	0°69	337°91	II.		N.	
19	6°75	2°35	0°01	0°04	129°49	0°66	335°90	II.		N.	
20	6°81	3°75	0°01	0°04	141°69	0°64	335°25	II.		N.	
21	6°48	4°92	0°01	0°04	153°90	0°62	335°82	II.		N.	
22	5°83	5°83	0°01	0°04	166°11	0°60	337°47	II.		N.	
23	4°91	6°45	0°01	0°04	178°33	0°58	340°07	II.		N.	
24	3°81	6°77	0°01	0°04	190°56	0°57	343°49	II.		N.	
25	2°59	6°80	0°01	0°04	202°79	0°55	347°61	II.		N.	
26	1°30	6°54	0°01	0°04	215°03	0°54	352°29	II.		N.	
27	+0°02	5°99	0°01	0°04	227°27	0°52	357°36				
28	-1°20	5°19	0°01	0°04	239°51	0°50	2°64				
29	-2°33	+4°16	+0°01	+0°04	251°76	-0°48	7°87				

EPHEMERIS FOR PHYSICAL OBSERVATIONS OF THE MOON.

Mid- night.	The Earth's Selenographic—		Physical Libration.		The Sun's Selenographic—		o	Illuminated Limbs at Transit at Greenwich, with Corrections to Defective Limbs when Observable.			
	Long.	Lat.	Long.	Lat.	Colong.	Lat.		R.A.	s	Dec.	"
July 29	-2°33	+4°16	+0°01	+0°04	251°76	-0°48	7°87				
30	3°33	2°92	0°01	0°04	264°01	0°46	12°79				
31	4°16	1°53	0°01	0°04	276°26	0°44	17°13				
1	4°82	+0°04	0°01	0°04	288°51	0°42	20°66				
2	5°26	-1°47	0°01	0°04	300°75	0°39	23°17				
3	5°48	2°92	0°01	0°04	313°00	0°36	24°53				
4	5°45	4°25	0°01	0°04	325°24	0°33	24°66	I.		N.	
5	5°17	5°37	0°01	0°04	337°47	0°30	23°52	I.		N.	
6	4°63	6°20	0°01	0°04	349°70	0°27	21°11	I.		N.	
7	3°83	6°68	0°01	0°04	1°92	0°24	17°47	I.		N.	
8	2°80	6°76	0°01	0°04	14°13	0°21	12°72	I.		N.	
9	1°58	6°43	0°01	0°04	26°34	0°18	7°05	I.		N.	
10	-0°23	5°68	0°01	0°04	38°54	0°14	0°79	I.		N.	
11	+1°16	4°56	0°01	0°04	50°73	0°10	354°37	I.		S.	0°02
12	2°51	3°14	0°02	0°04	62°92	0°06	348°33	I.		S.	1°24
13	3°72	-1°54	0°02	0°04	75°11	-0°03	343°14	I.		S.	1°15
14	4°72	+0°14	0°02	0°04	87°29	+0°01	339°16	II.	0°04	S.	0°02
15	5°43	1°79	0°02	0°04	99°48	0°04	336°57	II.		N.	
16	5°81	3°29	0°02	0°04	111°66	0°07	335°37	II.		N.	
17	5°85	4°58	0°02	0°04	123°85	0°10	335°49	II.		N.	
18	5°55	5°60	0°02	0°04	136°04	0°13	336°79	II.		N.	
19	4°95	6°32	0°02	0°04	148°24	0°15	339°12	II.		N.	
20	4°08	6°74	0°02	0°04	160°44	0°17	342°32	II.		N.	
21	3°00	6°85	0°02	0°04	172°65	0°19	346°26	II.		N.	
22	1°79	6°67	0°02	0°04	184°86	0°21	350°80	II.		N.	
23	+0°52	6°20	0°02	0°04	197°08	0°23	355°77	II.		N.	
24	-0°75	5°47	0°02	0°04	209°30	0°24	0°99	II.		N.	
25	1°95	4°50	0°02	0°04	221°53	0°26	6°24	II.		S.	
26	3°00	3°31	0°01	0°04	233°77	0°28	11°28				
27	3°86	1°95	0°01	0°04	246°00	0°30	15°84				
28	4°49	+0°48	0°01	0°04	258°24	0°32	19°67				
29	4°85	-1°05	0°01	0°04	270°48	0°34	22°53				
30	4°92	2°55	0°01	0°04	282°72	0°36	24°25				
31	4°72	3°94	0°02	0°03	294°96	0°38	24°72				
Sept. 1	4°27	5°13	0°02	0°03	307°20	0°41	23°89				
2	3°59	6°03	0°02	0°03	319°43	0°44	21°75				
3	2°74	6°59	0°02	0°03	331°65	0°47	18°36	I.		N.	
4	1°77	6°75	0°02	0°03	343°87	0°50	13°85	I.		N.	
5	-0°73	6°50	0°02	0°03	356°08	0°53	8°42	I.		N.	
6	+0°34	5°85	0°02	0°03	8°29	0°56	2°37	I.		N.	
7	1°39	4°84	0°02	0°03	20°48	0°60	356°10	I.		S.	0°04
8	2°37	3°54	0°02	0°03	32°67	0°63	350°07	I.		S.	
9	3°25	2°03	0°02	0°03	44°86	0°67	344°72	I.		S.	
10	4°00	-0°41	0°02	0°03	57°03	0°70	340°41	I.		S.	
11	4°57	+1°22	0°02	0°04	69°21	0°74	337°37	I.		S.	
12	4°95	2°76	0°02	0°04	81°38	0°77	335°68	I.	0°07	S.	
13	5°09	4°11	0°02	0°04	93°55	0°80	335°32	II.		S.	0°00
14	4°98	5°22	0°02	0°04	105°73	0°83	336°20	II.		N.	
15	4°60	6°05	0°02	0°04	117°90	0°86	338°18	II.		N.	
16	3°95	6°56	0°02	0°04	130°08	0°88	341°12	II.		N.	
17	3°07	6°77	0°02	0°04	142°26	0°90	344°86	II.		N.	
18	2°00	6°67	0°02	0°04	154°44	0°91	349°24	II.		N.	
19	+0°78	+6°28	+0°02	+0°04	166°63	+0°93	354°10	II.		N.	

EPHEMERIS FOR PHYSICAL OBSERVATIONS OF THE MOON.

Mid- night.	The Earth's Selenographic—		Physical Libration.		The Sun's Selenographic—		o	Illuminated Limbs at Transit at Greenwich, with Corrections to Defective Limbs when Observable.			
	Long.	Lat.	Long.	Lat.	Colong.	Lat.		R. A.	s	Dec.	
Sept. 19	+0°78	+6°28	+0°02	+0°04	166°63	+0°93	354°10	II.		N.	"
20	-0°52	5°63	0°02	0°04	178°83	0°94	359°25	II.		N.	
21	1°81	4°73	0°02	0°04	191°03	0°95	4°49	II.		S.	
22	3°02	3°62	0°02	0°04	203°23	0°96	9°59	II.		S.	
23	4°06	2°34	0°02	0°04	215°44	0°98	14°30	II.		S.	
24	4°86	+0°93	0°02	0°04	227°66	0°99	18°38				
25	5°34	-0°57	0°02	0°04	239°88	1°00	21°60				
26	5°47	2°07	0°02	0°03	252°10	1°01	23°76				
27	5°22	3°49	0°02	0°03	264°33	1°03	24°69				
28	4°60	4°75	0°02	0°03	276°55	1°04	24°29				
29	3°67	5°74	0°02	0°03	288°78	1°06	22°52				
30	2°51	6°39	0°02	0°03	301°00	1°08	19°41				
Oct. 1	-1°21	6°63	0°02	0°03	313°22	1°10	15°09				
2	+0°11	6°45	0°02	0°03	325°43	1°12	9°76	I.		N.	
3	1°35	5°87	0°02	0°03	337°64	1°14	3°75	I.		N.	
4	2°45	4°92	0°02	0°03	349°84	1°17	357°47	I.		S.	
5	3°37	3°68	0°02	0°03	2°03	1°19	351°38	I.		S.	
6	4°08	2°24	0°02	0°03	14°21	1°22	345°91	I.		S.	
7	4°60	-0°68	0°02	0°03	26°39	1°25	341°41	I.		S.	
8	4°94	+0°89	0°02	0°03	38°56	1°27	338°09	I.		S.	
9	5°10	2°40	0°02	0°03	50°72	1°30	336°06	I.		S.	
10	5°09	3°75	0°02	0°03	62°88	1°33	335°32	I.		S.	
11	4°90	4°89	0°02	0°04	75°04	1°35	335°81	I.		S.	
12	4°52	5°76	0°02	0°04	87°20	1°37	337°43	II.	0°10	S.	
13	3°95	6°34	0°02	0°04	99°35	1°39	340°05	II.		S.	0°03
14	3°19	6°61	0°02	0°04	111°51	1°40	343°54	II.		N.	0°55
15	2°23	6°57	0°02	0°04	123°67	1°41	347°74	II.		N.	1°14
16	+1°09	6°24	0°02	0°04	135°83	1°42	352°48	II.		N.	0°63
17	-0°17	5°65	0°02	0°04	147°99	1°43	357°57	II.		S.	0°02
18	1°51	4°81	0°02	0°04	160°16	1°43	2°79	II.		S.	
19	2°85	3°77	0°02	0°04	172°34	1°43	7°92	II.		S.	
20	4°11	2°56	0°02	0°04	184°52	1°43	12°74	II.		S.	
21	5°20	+1°22	0°02	0°03	196°71	1°43	17°00	II.		S.	
22	6°02	-0°21	0°02	0°03	208°90	1°43	20°50	II.		S.	
23	6°49	1°66	0°02	0°03	221°10	1°44	23°04	II.		S.	
24	6°53	3°07	0°02	0°03	233°30	1°44	24°45				
25	6°11	4°35	0°02	0°03	245°50	1°44	24°59				
26	5°22	5°41	0°02	0°03	257°71	1°44	23°37				
27	3°93	6°15	0°02	0°03	269°92	1°44	20°75				
28	2°33	6°50	0°02	0°03	282°13	1°45	16°78				
29	-0°57	6°41	0°02	0°03	294°34	1°45	11°63				
30	+1°17	5°89	0°02	0°03	306°54	1°46	5°62				
31	2°76	4°98	0°02	0°03	318°74	1°47	359°18				
Nov. 1	4°09	3°75	0°02	0°03	330°93	1°48	352°83	I.		S.	
2	5°09	2°31	0°02	0°03	343°12	1°49	347°08	I.		S.	
3	5°77	-0°76	0°02	0°03	355°29	1°50	342°30	I.		S.	
4	6°13	+0°80	0°02	0°03	7°46	1°52	338°72	I.		S.	
5	6°23	2°28	0°02	0°03	19°63	1°53	336°42	I.		S.	
6	6°09	3°62	0°02	0°03	31°79	1°54	335°40	I.		S.	
7	5°75	4°75	0°02	0°03	43°94	1°56	335°60	I.		S.	
8	5°25	5°63	0°02	0°03	56°09	1°57	336°91	I.		S.	
9	4°59	6°23	0°02	0°03	68°23	1°57	339°24	I.		S.	
10	+3°78	+6°52	+0°02	+0°03	80°37	+1°58	342°47	I.	0°18	S.	

EPHEMERIS FOR PHYSICAL OBSERVATIONS OF THE MOON.

Mid- night.	The Earth's Selenographic—		Physical Libration.		The Sun's Selenographic—		0	Illuminated Limbs at Transit at Greenwich, with Corrections to Defective Limbs when Observable.			
	Long.	Lat.	Long.	Lat.	Colong.	Lat.		R.A.	s	Dec.	"
Nov. 10	+3.78	+6.52	+0.02	+0.03	80.37	+1.58	342.47	I.	0.18	S.	"
11	2.83	6.52	0.02	0.03	92.51	1.58	346.46	II.		S.	
12	1.74	6.22	0.02	0.03	104.65	1.58	351.05	II.		S.	0.71
13	+0.52	5.66	0.02	0.03	116.79	1.58	356.06	II.		S.	0.60
14	-0.80	4.85	0.02	0.03	128.94	1.57	1.27	II.		S.	
15	2.17	3.83	0.02	0.03	141.09	1.56	6.44	II.		S.	
16	3.55	2.65	0.02	0.03	153.24	1.55	11.34	II.		S.	
17	4.85	+1.35	0.02	0.03	165.40	1.54	15.74	II.		S.	
18	6.00	-0.04	0.01	0.03	177.56	1.53	19.44	II.		S.	
19	6.89	1.45	0.01	0.03	189.72	1.51	22.26	II.		S.	
20	7.43	2.82	0.01	0.03	201.90	1.50	24.05	II.		S.	
21	7.54	4.09	0.01	0.03	214.08	1.49	24.68	II.		S.	
22	7.14	5.18	0.01	0.03	226.26	1.47	24.05	II.		S.	
23	6.23	6.00	0.01	0.03	238.45	1.46	22.06				
24	4.82	6.46	0.01	0.03	250.64	1.45	18.70				
25	3.02	6.49	0.01	0.03	262.84	1.44	14.03				
26	-0.99	6.07	0.01	0.03	275.04	1.43	8.25				
27	+1.09	5.22	0.01	0.03	287.23	1.42	1.75				
28	3.03	4.01	0.01	0.03	299.42	1.41	355.09				
29	4.68	2.53	0.01	0.03	311.61	1.40	348.86				
30	5.94	-0.93	0.02	0.03	323.80	1.40	343.57	I.		S.	
Dec. 1	6.79	+0.69	0.02	0.03	335.97	1.40	339.53	I.		S.	
2	7.22	2.23	0.02	0.03	348.14	1.39	336.86	I.		S.	
3	7.29	3.61	0.02	0.03	0.31	1.39	335.54	I.		S.	
4	7.04	4.76	0.02	0.03	12.46	1.39	335.47	I.		S.	
5	6.53	5.66	0.02	0.03	24.61	1.38	336.55	I.		S.	
6	5.82	6.27	0.02	0.03	36.76	1.38	338.64	I.		S.	
7	4.94	6.59	0.02	0.03	48.90	1.38	341.63	I.		S.	
8	3.93	6.60	0.02	0.03	61.03	1.37	345.41	I.		S.	
9	2.80	6.32	0.01	0.03	73.16	1.36	349.83	I.		S.	
10	1.57	5.77	0.01	0.03	85.30	1.35	354.73	I.	0.08	S.	
11	+0.27	4.96	0.01	0.03	97.43	1.33	359.90	II.		S.	
12	-1.08	3.95	0.01	0.03	109.56	1.31	5.11	II.		S.	
13	2.45	2.77	0.01	0.03	121.69	1.29	10.11	II.		S.	
14	3.80	1.46	0.01	0.03	133.83	1.27	14.66	II.		S.	
15	5.07	+0.07	0.01	0.03	145.97	1.24	18.54	II.		S.	
16	6.19	-1.33	0.01	0.03	158.11	1.22	21.57	II.		S.	
17	7.09	2.70	0.01	0.03	170.26	1.19	23.62	II.		S.	
18	7.68	3.97	0.01	0.03	182.41	1.17	24.59	II.		S.	
19	7.88	5.08	0.01	0.03	194.57	1.14	24.40	II.		S.	
20	7.62	5.94	0.01	0.03	206.74	1.12	22.97	II.		S.	
21	6.87	6.49	0.01	0.03	218.91	1.09	20.26	II.		S.	
22	5.62	6.66	0.01	0.03	231.09	1.06	16.26				
23	3.95	6.39	0.01	0.03	243.28	1.04	11.05				
24	-1.97	5.68	0.01	0.03	255.47	1.02	4.88				
25	+0.16	4.55	0.01	0.03	267.66	0.99	358.18				
26	2.24	3.09	0.01	0.03	279.85	0.97	351.56				
27	4.11	-1.43	0.01	0.03	292.04	0.95	345.65				
28	5.63	+0.29	0.01	0.03	304.22	0.93	340.92				
29	6.73	1.95	0.01	0.03	316.40	0.91	337.63	I.		S.	
30	7.39	3.45	0.01	0.03	328.58	0.90	335.82	I.		S.	
31	7.61	4.70	0.01	0.03	340.75	0.88	335.39	I.		S.	
32	+7.44	+5.68	+0.01	+0.03	352.91	+0.86	336.19	I.		S.	

ILLUMINATED DISC OF MERCURY.

Noon.	<i>k</i>	<i>i</i>	<i>θ</i>	<i>L</i>	Stellar Mag.	Noon.	<i>k</i>	<i>i</i>	<i>θ</i>	<i>L</i>	Stellar Mag.
Jan. 1	0.403	101°	349°	58.6	+0.1	July 4	0.997	6°	224°	65.7	-1.8
6	0.168	132	344	35.1	1.0	9	0.983	15	349	58.1	1.5
11	0.017	165	316	4.2	2.4	14	0.931	30	3	49.1	1.0
16	0.049	155	197	10.9	2.0	19	0.865	43	10	41.7	0.6
21	0.204	126	185	33.5	1.0	24	0.798	53	15	36.7	-0.3
26	0.374	105	181	42.2	+0.5	29	0.733	62	18	33.5	0.0
31	0.512	89	177	40.8	0.3	Aug. 3	0.670	70	21	31.9	+0.2
Feb. 5	0.616	77	173	36.7	0.2	8	0.605	78	24	31.3	0.4
10	0.694	67	169	32.9	+0.1	13	0.536	86	26	31.5	0.5
15	0.756	59	165	30.2	0.0	18	0.457	95	28	32.0	0.6
20	0.805	52	161	28.5	0.0	23	0.365	106	30	31.6	+0.8
25	0.848	46	158	28.0	-0.1	28	0.258	119	33	28.7	1.1
Mar. 1	0.886	40	154	28.6	0.3	Sept. 2	0.142	136	38	20.4	1.6
6	0.921	33	150	30.5	0.5	7	0.042	156	51	7.5	2.3
11	0.954	25	145	34.1	0.8	12	0.008	170	144	1.7	2.9
16	0.982	15	138	39.6	-1.1	17	0.087	146	194	17.2	+1.7
21	0.998	5	99	47.8	1.5	22	0.273	117	202	45.7	+0.6
26	0.987	13	347	58.1	1.6	27	0.508	89	206	65.2	-0.2
31	0.926	32	337	67.6	1.4	Oct. 2	0.717	64	209	66.8	0.7
Apr. 5	0.799	53	335	70.6	1.0	7	0.860	44	211	57.5	0.9
10	0.625	76	335	64.2	-0.5	12	0.941	28	213	46.5	-1.0
15	0.444	96	335	51.7	+0.2	17	0.981	16	216	37.8	1.0
20	0.282	116	336	37.2	0.8	22	0.997	6	222	31.8	1.0
25	0.151	134	335	22.5	1.5	27	1.000	2	355	28.0	1.0
30	0.057	152	335	9.4	2.2	Nov. 1	0.994	9	20	25.7	0.8
May 5	0.007	171	333	1.2	+3.1	6	0.983	15	21	24.8	-0.6
10	0.006	171	153	1.0	3.1	11	0.967	21	20	24.9	0.5
15	0.048	155	152	7.6	2.4	16	0.945	27	18	26.1	0.4
20	0.119	140	153	16.4	1.8	21	0.914	34	15	28.7	0.4
25	0.204	126	153	23.9	1.4	26	0.870	42	12	32.8	0.4
30	0.294	114	155	29.7	+1.0	Dec. 1	0.805	52	8	38.9	-0.4
June 4	0.389	103	157	34.5	0.7	6	0.709	65	4	46.9	0.3
9	0.491	91	159	39.5	+0.4	11	0.565	83	0	54.8	-0.2
14	0.603	78	163	45.7	0.0	16	0.364	106	357	53.7	+0.3
19	0.726	63	167	53.6	-0.5	21	0.138	136	352	29.5	1.2
24	0.850	46	174	62.0	-1.0	26	0.007	170	311	1.8	+2.7
29	0.951	26	184	67.3	-1.5	31	0.074	148	198	16.4	+1.7

ILLUMINATED DISC OF VENUS.

Noon.	<i>k</i>	<i>i</i>	<i>o</i>	<i>L</i>	Stellar Mag.	Noon.	<i>k</i>	<i>i</i>	<i>o</i>	<i>L</i>	Stellar Mag.
Jan. 1	0.887	39.2	348.3	57.8	-3.4	July 4	0.006	171.4	142.8	8.9	-3.0
6	0.877	41.0	346.2	59.2	3.4	9	0.026	161.4	160.7	38.7	3.4
11	0.867	42.7	344.4	60.7	3.4	14	0.060	151.6	165.8	80.8	3.7
16	0.856	44.5	342.8	62.3	3.4	19	0.103	142.6	168.4	121.1	3.9
21	0.845	46.3	341.3	64.0	3.4	24	0.149	134.6	170.4	151.5	4.1
26	0.833	48.2	340.1	65.8	-3.4	29	0.196	127.5	172.2	170.1	-4.2
31	0.821	50.1	339.1	67.8	3.5	Aug. 3	0.241	121.2	174.1	178.9	4.2
Feb. 5	0.808	52.0	338.3	69.9	3.5	8	0.284	115.6	176.0	180.5	4.2
10	0.794	53.9	337.7	72.2	3.5	13	0.324	110.6	178.0	177.4	4.2
15	0.780	55.9	337.4	74.7	3.5	18	0.361	106.1	180.1	171.6	4.2
20	0.765	58.0	337.2	77.4	-3.6	23	0.396	102.0	182.3	164.4	-4.1
25	0.749	60.1	337.3	80.4	3.6	28	0.429	98.2	184.5	156.5	4.1
Mar. 1	0.733	62.3	337.6	83.5	3.6	Sept. 2	0.459	94.6	186.7	148.6	4.0
6	0.715	64.5	338.1	86.9	3.6	7	0.488	91.3	188.9	141.0	4.0
11	0.697	66.8	338.7	90.6	3.7	12	0.516	88.2	191.1	133.6	4.0
16	0.678	69.1	339.6	94.6	-3.7	17	0.541	85.3	193.3	126.8	-3.9
21	0.658	71.5	340.7	98.9	3.7	22	0.566	82.4	195.3	120.4	3.9
26	0.638	74.0	342.0	103.7	3.8	27	0.589	79.7	197.2	114.6	3.8
31	0.616	76.6	343.4	108.8	3.8	Oct. 2	0.612	77.1	199.0	109.2	3.8
Apr. 5	0.593	79.3	345.0	114.4	3.8	7	0.633	74.6	200.5	104.2	3.8
10	0.568	82.1	346.7	120.4	-3.9	12	0.654	72.1	201.9	99.6	-3.7
15	0.543	85.1	348.5	127.0	3.9	17	0.673	69.7	203.1	95.4	3.7
20	0.516	88.2	350.4	134.0	4.0	22	0.692	67.4	204.0	91.5	3.7
25	0.488	91.4	352.3	141.5	4.0	27	0.710	65.1	204.7	87.9	3.6
30	0.457	94.9	354.2	149.4	4.0	Nov. 1	0.728	62.9	205.2	84.5	3.6
May 5	0.425	98.6	356.0	157.4	-4.1	6	0.745	60.7	205.4	81.4	-3.6
10	0.391	102.6	357.8	165.2	4.1	11	0.761	58.5	205.3	78.6	3.6
15	0.355	106.9	359.4	172.3	4.2	16	0.776	56.4	204.9	75.9	3.5
20	0.316	111.6	0.8	177.6	4.2	21	0.791	54.4	204.3	73.4	3.5
25	0.274	116.9	2.1	179.6	4.2	26	0.805	52.3	203.4	71.1	3.5
30	0.229	122.8	3.2	176.3	-4.2	Dec. 1	0.819	50.4	202.3	68.9	-3.5
June 4	0.183	129.4	4.1	164.9	4.1	6	0.832	48.4	200.8	66.9	3.5
9	0.135	136.8	5.1	142.9	4.0	11	0.844	46.5	199.1	65.0	3.4
14	0.089	145.2	6.3	109.3	3.9	16	0.856	44.6	197.1	63.3	3.4
19	0.049	154.5	8.6	67.3	3.6	21	0.867	42.7	194.9	61.6	3.4
24	0.018	164.5	14.8	27.4	-3.3	26	0.878	40.8	192.5	60.0	-3.4
29	0.003	174.0	47.2	4.4	-2.8	31	0.888	39.0	189.8	58.6	-3.4

EPHEMERIS FOR PHYSICAL OBSERVATIONS OF MARS.

Midnight.	Light-Time.	Stellar Magnitude.	P	$A_{\oplus} + 180^{\circ}$	D_{\oplus}	$A_{\odot} - A_{\oplus}$	D_{\odot}	$\odot \delta$
Jan.								
	m							
1	16.86	+1.7	36.73	322.94	+14.27	-28.94	+22.12	112.13
3	16.72	1.7	36.66	324.18	13.82	29.20	21.96	113.06
5	16.58	1.7	36.57	325.42	13.37	29.45	21.80	113.99
7	16.44	1.7	36.46	326.65	12.92	29.70	21.63	114.92
9	16.30	1.6	36.33	327.88	12.45	29.94	21.45	115.86
11	16.15	+1.6	36.18	329.11	+11.99	-30.18	+21.27	116.79
13	16.01	1.6	36.01	330.33	11.52	30.41	21.08	117.73
15	15.86	1.6	35.82	331.54	11.04	30.64	20.89	118.68
17	15.72	1.6	35.61	332.75	10.56	30.86	20.69	119.62
19	15.57	1.6	35.38	333.96	10.07	31.08	20.48	120.57
21	15.43	+1.5	35.14	335.17	+9.58	-31.30	+20.27	121.52
23	15.28	1.5	34.88	336.37	9.09	31.51	20.05	122.47
25	15.13	1.5	34.59	337.56	8.59	31.72	19.83	123.42
27	14.98	1.5	34.29	338.76	8.08	31.93	19.60	124.38
29	14.83	1.5	33.98	339.95	7.58	32.14	19.36	125.34
Feb.								
31	14.68	+1.4	33.64	341.14	+7.08	-32.34	+19.12	126.30
2	14.53	1.4	33.29	342.32	6.57	32.54	18.87	127.27
4	14.38	1.4	32.92	343.50	6.06	32.73	18.62	128.24
6	14.23	1.4	32.54	344.68	5.54	32.92	18.36	129.21
8	14.08	1.4	32.14	345.86	5.03	33.11	18.09	130.18
10	13.92	+1.3	31.72	347.03	+4.51	-33.30	+17.82	131.16
12	13.77	1.3	31.29	348.21	4.00	33.49	17.54	132.14
14	13.62	1.3	30.84	349.38	3.48	33.67	17.26	133.12
16	13.46	1.3	30.38	350.54	2.96	33.86	16.97	134.10
18	13.31	1.2	29.90	351.71	2.44	34.04	16.67	135.09
20	13.16	+1.2	29.41	352.88	+1.92	-34.22	+16.37	136.08
22	13.01	1.2	28.90	354.04	1.40	34.39	16.07	137.08
24	12.85	1.2	28.38	355.20	0.89	34.57	15.76	138.08
26	12.70	1.1	27.85	356.36	+0.37	34.75	15.44	139.08
28	12.54	1.1	27.31	357.52	-0.15	34.92	15.12	140.08
Mar.								
1	12.39	+1.1	26.75	358.68	-0.66	-35.09	+14.79	141.09
3	12.24	1.1	26.18	359.84	1.17	35.27	14.46	142.10
5	12.09	1.0	25.61	1.00	1.68	35.44	14.12	143.11
7	11.93	1.0	25.02	2.16	2.19	35.61	13.78	144.13
9	11.78	1.0	24.42	3.32	2.70	35.78	13.43	145.15
11	11.63	+0.9	23.81	4.47	-3.20	-35.95	+13.08	146.18
13	11.48	0.9	23.19	5.63	3.70	36.12	12.72	147.20
15	11.32	0.9	22.56	6.78	4.20	36.28	12.36	148.23
17	11.17	0.9	21.93	7.94	4.69	36.45	11.99	149.27
19	11.02	0.8	21.28	9.09	5.18	36.61	11.62	150.31
21	10.87	+0.8	20.63	10.25	-5.67	-36.78	+11.24	151.35
23	10.72	0.8	19.97	11.40	6.15	36.94	10.86	152.39
25	10.57	0.7	19.30	12.56	6.62	37.11	10.47	153.44
27	10.42	0.7	18.63	13.72	7.09	37.27	10.08	154.49
29	10.27	0.7	17.95	14.87	7.56	37.43	9.68	155.55
31	10.13	+0.6	17.27	16.03	-8.02	-37.59	+9.28	156.61

EPHEMERIS FOR PHYSICAL OBSERVATIONS OF MARS.

Mid-night.	k	Diame-ter.	i	q	Q	Central Meridian.		Mean Time of Transit of Zero Meridian.	
						Of Date.	Of Intermedi-ate Date.	Of Date.	Of Intermedi-ate Date.
								h m	h m
Jan. 1	0.939	4.61	28.54	0.28	286.52	88.24	78.52	5 57.2	6 37.2
3	0.938	4.65	28.90	0.29	286.10	68.82	59.11	7 17.1	7 57.0
5	0.936	4.69	29.25	0.30	285.67	49.40	39.69	8 36.9	9 16.8
7	0.935	4.73	29.60	0.31	285.24	29.98	20.28	9 56.7	10 36.6
9	0.933	4.77	29.95	0.32	284.80	10.57	0.87	11 16.5	11 56.4
11	0.932	4.82	30.30	0.33	284.35	351.17	341.46	12 36.3	13 16.2
13	0.930	4.86	30.65	0.34	283.90	331.76	322.07	13 56.1	14 35.9
15	0.929	4.90	30.99	0.35	283.43	312.37	302.67	15 15.8	15 55.7
17	0.927	4.95	31.33	0.36	282.96	292.98	283.28	16 35.5	17 15.4
19	0.926	4.99	31.67	0.37	282.48	273.59	263.90	17 55.2	18 35.0
21	0.924	5.04	32.00	0.38	282.00	254.20	244.51	19 14.9	19 54.7
23	0.922	5.09	32.33	0.39	281.51	234.82	225.14	20 34.6	21 14.4
25	0.921	5.14	32.66	0.41	281.01	215.45	205.76	21 54.2	22 34.0
27	0.919	5.19	32.99	0.42	280.51	196.07	186.39	23 13.8	23 53.6
29	0.918	5.24	33.31	0.43	280.00	176.70	167.02	..	0 33.5
31	0.916	5.30	33.63	0.44	279.48	157.33	147.65	1 13.3	1 53.1
Feb. 2	0.915	5.35	33.95	0.46	278.96	137.97	128.29	2 32.9	3 12.7
4	0.913	5.41	34.27	0.47	278.44	118.61	108.93	3 52.4	4 32.2
6	0.912	5.47	34.58	0.48	277.91	99.25	89.57	5 12.0	5 51.8
8	0.910	5.53	34.88	0.50	277.37	79.90	70.22	6 31.6	7 11.4
10	0.909	5.59	35.18	0.51	276.84	60.54	50.87	7 51.2	8 30.9
12	0.907	5.65	35.48	0.52	276.29	41.19	31.52	9 10.7	9 50.5
14	0.906	5.71	35.78	0.54	275.75	21.84	12.17	10 30.2	11 10.0
16	0.904	5.78	36.07	0.55	275.20	2.49	352.82	11 49.7	12 29.5
18	0.903	5.84	36.36	0.57	274.65	343.15	333.48	13 9.3	13 49.0
20	0.901	5.91	36.64	0.58	274.10	323.81	314.14	14 28.8	15 8.5
22	0.900	5.98	36.92	0.60	273.54	304.46	294.79	15 48.3	16 28.0
24	0.898	6.05	37.19	0.62	272.99	285.12	275.45	17 7.8	17 47.5
26	0.897	6.12	37.46	0.63	272.43	265.78	256.11	18 27.3	19 7.0
28	0.895	6.20	37.73	0.65	271.87	246.44	236.77	19 46.8	20 26.5
Mar. 1	0.894	6.28	37.99	0.66	271.31	227.10	217.44	21 6.2	21 46.0
3	0.893	6.35	38.25	0.68	270.76	207.77	198.10	22 25.7	23 5.5
5	0.891	6.44	38.50	0.70	270.20	188.43	178.76	23 45.2	..
7	0.890	6.52	38.75	0.72	269.64	169.09	159.43	0 25.0	1 4.7
9	0.889	6.60	38.99	0.74	269.09	149.76	140.09	1 44.4	2 24.2
11	0.887	6.69	39.22	0.75	268.54	130.42	120.76	3 3.9	3 43.6
13	0.886	6.78	39.45	0.77	267.99	111.09	101.42	4 23.4	5 3.1
15	0.885	6.87	39.68	0.79	267.44	91.76	82.09	5 42.8	6 22.6
17	0.884	6.96	39.90	0.81	266.90	72.42	62.75	7 2.3	7 42.1
19	0.882	7.06	40.11	0.83	266.36	53.09	43.42	8 21.8	9 1.5
21	0.881	7.16	40.31	0.85	265.82	33.75	24.08	9 41.3	10 21.0
23	0.880	7.26	40.51	0.87	265.29	14.42	4.75	11 0.7	11 40.5
25	0.879	7.36	40.71	0.89	264.76	355.08	345.41	12 20.2	13 0.0
27	0.878	7.46	40.90	0.91	264.24	335.75	326.08	13 39.7	14 19.4
29	0.877	7.57	41.08	0.93	263.72	316.41	306.74	14 59.2	15 38.9
31	0.876	7.68	41.25	0.95	263.21	297.07	287.41	16 18.6	16 58.4

EPHEMERIS FOR PHYSICAL OBSERVATIONS OF MARS.

Midnight.	Light-Time.	Stellar Magnitude.	P	$A_{\oplus} + 180^{\circ}$	D_{\oplus}	$A_{\odot} - A_{\oplus}$	D_{\odot}	$\odot \delta$
	m							
Mar. 31	10.13	+0.6	17.27	16.03	- 8.02	-37.59	+ 9.28	156.61
Apr. 2	9.98	0.6	16.58	17.19	8.47	37.75	8.88	157.67
4	9.83	0.6	15.89	18.34	8.92	37.91	8.47	158.74
6	9.69	0.5	15.19	19.50	9.36	38.07	8.06	159.81
8	9.54	0.5	14.49	20.65	9.79	38.22	7.65	160.88
10	9.40	+0.5	13.79	21.81	-10.22	-38.37	+ 7.23	161.96
12	9.25	0.4	13.08	22.96	10.64	38.52	6.81	163.04
14	9.11	0.4	12.38	24.11	11.05	38.67	6.38	164.13
16	8.97	0.4	11.67	25.26	11.45	38.82	5.95	165.22
18	8.83	0.3	10.96	26.41	11.85	38.96	5.52	166.31
20	8.69	+0.3	10.25	27.56	-12.23	-39.10	+ 5.08	167.41
22	8.55	0.3	9.54	28.71	12.61	39.23	4.64	168.51
24	8.41	0.2	8.83	29.86	12.98	39.36	4.20	169.62
26	8.27	0.2	8.12	31.00	13.34	39.49	3.76	170.72
28	8.13	0.1	7.41	32.14	13.69	39.61	3.31	171.84
May 30	8.00	+0.1	6.70	33.28	-14.03	-39.73	+ 2.86	172.95
2	7.86	+0.1	5.99	34.41	14.36	39.84	2.41	174.07
4	7.73	0.0	5.29	35.54	14.68	39.94	1.95	175.20
6	7.60	0.0	4.60	36.67	14.98	40.03	1.49	176.32
8	7.47	-0.1	3.90	37.79	15.28	40.11	1.03	177.45
10	7.34	-0.1	3.21	38.90	-15.57	-40.19	+ 0.57	178.59
12	7.21	0.2	2.53	40.01	15.84	40.26	+ 0.11	179.73
14	7.08	0.2	1.85	41.11	16.11	40.31	- 0.35	180.87
16	6.95	0.2	1.18	42.20	16.36	40.36	0.82	182.02
18	6.83	0.3	0.51	43.29	16.60	40.39	1.29	183.17
20	6.70	-0.3	359.85	44.36	-16.83	-40.41	- 1.75	184.32
22	6.58	0.4	359.20	45.43	17.05	40.42	2.22	185.48
24	6.46	0.4	358.56	46.48	17.25	40.41	2.69	186.64
26	6.34	0.5	357.93	47.52	17.44	40.39	3.16	187.80
28	6.22	0.5	357.31	48.55	17.62	40.34	3.63	188.97
June 30	6.10	-0.6	356.69	49.57	-17.79	-40.28	- 4.10	190.14
1	5.98	0.6	356.09	50.56	17.94	40.20	4.58	191.32
3	5.87	0.7	355.51	51.54	18.08	40.10	5.05	192.50
5	5.76	0.7	354.93	52.51	18.21	39.97	5.52	193.68
7	5.64	0.8	354.37	53.45	18.33	39.82	5.99	194.87
9	5.53	-0.8	353.82	54.37	-18.43	-39.64	- 6.45	196.06
11	5.42	0.9	353.29	55.27	18.52	39.44	6.92	197.25
13	5.32	0.9	352.78	56.15	18.60	39.20	7.39	198.44
15	5.21	1.0	352.28	57.01	18.67	38.94	7.85	199.64
17	5.11	1.0	351.79	57.83	18.73	38.65	8.32	200.85
19	5.00	-1.1	351.33	58.63	-18.77	-38.32	- 8.78	202.05
21	4.90	1.1	350.88	59.40	18.80	37.96	9.24	203.26
23	4.80	1.2	350.45	60.14	18.82	37.56	9.69	204.47
25	4.71	1.2	350.04	60.85	18.83	37.12	10.15	205.69
27	4.61	1.3	349.66	61.52	18.83	36.64	10.60	206.91
July 29	4.52	-1.3	349.30	62.15	-18.81	-36.12	-11.05	208.13
1	4.43	-1.4	348.96	62.74	-18.79	-35.55	-11.49	209.35

EPHEMERIS FOR PHYSICAL OBSERVATIONS OF MARS.

Mid-night.	<i>k</i>	Diameter.	<i>i</i>	<i>q</i>	<i>Q</i>	Central Meridian.		Mean Time of Transit of Zero Meridian.	
						Of Date.	Of Intermediate Date.	Of Date.	Of Intermediate Date.
								h m	h m
Mar. 31	0.876	7.68	41.25	0.95	263.21	297.07	287.41	16 18.6	16 58.4
Apr. 2	0.875	7.79	41.42	0.97	262.70	277.74	268.07	17 38.1	18 17.9
4	0.874	7.91	41.58	1.00	262.21	258.40	248.73	18 57.6	19 37.4
6	0.873	8.03	41.73	1.02	261.72	239.06	229.40	20 17.1	20 56.8
8	0.872	8.15	41.87	1.04	261.23	219.73	210.06	21 36.6	22 16.3
10	0.872	8.28	42.00	1.06	260.76	200.40	190.73	22 56.0	23 35.8
12	0.871	8.41	42.13	1.09	260.29	181.06	171.39	..	0 15.5
14	0.870	8.54	42.25	1.11	259.83	161.73	152.06	0 55.2	1 35.0
16	0.870	8.67	42.36	1.13	259.39	142.39	132.73	2 14.7	2 54.4
18	0.869	8.81	42.46	1.16	258.95	123.06	113.40	3 34.2	4 13.9
20	0.868	8.95	42.55	1.18	258.52	103.73	94.07	4 53.6	5 33.4
22	0.868	9.10	42.63	1.20	258.10	84.40	74.74	6 13.1	6 52.8
24	0.868	9.25	42.70	1.23	257.69	65.07	55.41	7 32.5	8 12.2
26	0.867	9.40	42.76	1.25	257.29	45.75	36.08	8 52.0	9 31.7
28	0.867	9.56	42.81	1.27	256.90	26.42	16.76	10 11.4	10 51.1
30	0.867	9.72	42.85	1.30	256.52	7.10	357.44	11 30.8	12 10.5
May 2	0.866	9.89	42.87	1.32	256.16	347.78	338.13	12 50.2	13 29.9
4	0.866	10.06	42.89	1.34	255.80	328.47	318.82	14 9.6	14 49.3
6	0.866	10.24	42.89	1.37	255.46	309.16	299.51	15 29.0	16 8.6
8	0.866	10.42	42.88	1.39	255.13	289.86	280.21	16 48.3	17 28.0
10	0.867	10.60	42.85	1.41	254.82	270.56	260.91	18 7.6	18 47.2
12	0.867	10.79	42.81	1.44	254.51	251.27	241.63	19 26.9	20 6.5
14	0.867	10.99	42.75	1.46	254.22	231.98	222.34	20 46.2	21 25.8
16	0.868	11.19	42.68	1.48	253.94	212.71	203.07	22 5.4	22 45.0
18	0.868	11.39	42.60	1.50	253.68	193.44	183.81	23 24.6	..
20	0.869	11.60	42.50	1.52	253.43	174.18	164.55	0 4.1	0 43.7
22	0.869	11.82	42.38	1.54	253.19	154.93	145.30	1 23.3	2 2.8
24	0.870	12.04	42.24	1.56	252.97	135.68	126.07	2 42.4	3 21.9
26	0.871	12.27	42.09	1.58	252.77	116.46	106.85	4 1.4	4 40.9
28	0.872	12.51	41.91	1.60	252.58	97.24	87.64	5 20.4	5 59.8
30	0.873	12.75	41.72	1.62	252.40	78.04	68.44	6 39.3	7 18.7
June 1	0.874	13.00	41.50	1.63	252.24	58.85	49.27	7 58.1	8 37.5
3.	0.876	13.25	41.26	1.65	252.10	39.68	30.11	9 16.9	9 56.3
5	0.877	13.51	41.00	1.66	251.98	20.53	10.96	10 35.6	11 14.9
7	0.879	13.78	40.72	1.67	251.87	1.40	351.84	11 54.2	12 33.5
9	0.881	14.06	40.41	1.68	251.78	342.29	332.74	13 12.8	13 52.0
11	0.883	14.34	40.07	1.68	251.70	323.20	313.66	14 31.2	15 10.4
13	0.885	14.63	39.71	1.69	251.65	304.13	294.61	15 49.5	16 28.7
15	0.887	14.93	39.32	1.69	251.61	285.09	275.58	17 7.8	17 46.9
17	0.889	15.23	38.89	1.69	251.60	266.07	256.57	18 25.9	19 4.9
19	0.892	15.54	38.44	1.69	251.60	247.08	237.60	19 43.9	20 22.9
21	0.894	15.86	37.96	1.68	251.63	228.12	218.65	21 1.8	21 40.7
23	0.897	16.19	37.44	1.67	251.68	209.19	199.73	22 19.5	22 58.3
25	0.900	16.52	36.89	1.65	251.75	190.29	180.85	23 37.1	..
27	0.903	16.86	36.31	1.64	251.85	171.43	162.01	0 15.8	0 54.5
29	0.906	17.21	35.68	1.62	251.98	152.60	143.20	1 33.2	2 11.8
July 1	0.910	17.56	35.01	1.59	252.13	133.82	124.44	2 50.4	3 28.9

EPHEMERIS FOR PHYSICAL OBSERVATIONS OF MARS.

Midnight.	Light-Time.	Stellar Magnitude.	P	$A_{\oplus} + 180^{\circ}$	D_{\oplus}	$A_{\odot} - A_{\oplus}$	D_{\odot}	$\odot \delta$	
m									
July	1	4.43	-1.4	348.96	62.74	-18.79	-35.55	-11.49	209.35
	3	4.34	1.5	348.64	63.29	18.75	34.93	11.93	210.58
	5	4.25	1.5	348.35	63.80	18.71	34.26	12.37	211.81
	7	4.17	1.6	348.09	64.26	18.66	33.54	12.80	213.04
	9	4.09	1.6	347.85	64.68	18.59	32.77	13.23	214.27
	11	4.01	-1.7	347.63	65.05	-18.52	-31.95	-13.65	215.51
	13	3.93	1.8	347.45	65.37	18.44	31.07	14.07	216.75
	15	3.85	1.8	347.29	65.65	18.36	30.14	14.49	217.99
	17	3.78	1.9	347.16	65.87	18.27	29.14	14.90	219.23
	19	3.71	1.9	347.06	66.04	18.17	28.09	15.30	220.48
	21	3.65	-2.0	346.99	66.15	-18.06	-26.98	-15.70	221.73
	23	3.59	2.0	346.95	66.21	17.95	25.80	16.09	222.98
	25	3.53	2.1	346.94	66.21	17.84	24.56	16.47	224.23
	27	3.47	2.2	346.96	66.16	17.72	23.26	16.85	225.48
	29	3.42	2.2	347.02	66.05	17.60	21.90	17.22	226.74
	Aug.	31	3.37	-2.3	347.10	65.89	-17.48	-20.48	-17.58
2		3.32	2.3	347.21	65.68	17.35	19.00	17.93	229.25
4		3.28	2.4	347.35	65.41	17.23	17.46	18.28	230.51
6		3.24	2.4	347.52	65.10	17.11	15.86	18.62	231.77
8		3.21	2.5	347.72	64.75	16.99	14.22	18.95	233.04
10		3.18	-2.5	347.93	64.35	-16.87	-12.53	-19.27	234.30
12		3.16	2.5	348.17	63.92	16.76	10.80	19.59	235.57
14		3.14	2.6	348.43	63.45	16.65	9.03	19.89	236.83
16		3.12	2.6	348.71	62.96	16.55	7.23	20.18	238.10
18		3.11	2.6	349.00	62.44	16.46	5.40	20.47	239.36
20		3.10	-2.7	349.30	61.91	-16.37	-3.54	-20.74	240.63
22		3.10	2.7	349.61	61.37	16.29	-1.67	21.01	241.90
24		3.10	2.7	349.92	60.83	16.23	+0.21	21.27	243.17
26		3.11	2.6	350.24	60.28	16.18	2.09	21.51	244.44
28		3.12	2.6	350.55	59.74	16.14	3.97	21.74	245.71
Sept.		30	3.14	-2.6	350.85	59.22	-16.11	+5.84	-21.97	246.98
	1	3.16	2.6	351.15	58.72	16.10	7.69	22.18	248.25
	3	3.18	2.5	351.43	58.25	16.10	9.51	22.38	249.52
	5	3.21	2.5	351.69	57.80	16.12	11.31	22.57	250.78
	7	3.25	2.4	351.93	57.40	16.15	13.08	22.75	252.05
	9	3.29	-2.4	352.15	57.03	-16.20	+14.81	-22.91	253.32
	11	3.33	2.3	352.35	56.71	16.27	16.50	23.07	254.59
	13	3.38	2.3	352.52	56.44	16.35	18.14	23.21	255.85
	15	3.43	2.2	352.65	56.21	16.44	19.74	23.34	257.12
	17	3.48	2.2	352.76	56.04	16.56	21.29	23.46	258.39
	19	3.54	-2.1	352.84	55.91	-16.68	+22.79	-23.57	259.65
	21	3.60	2.1	352.89	55.84	16.82	24.24	23.66	260.91
	23	3.67	2.0	352.91	55.82	16.98	25.63	23.74	262.18
	25	3.74	1.9	352.90	55.85	17.14	26.97	23.81	263.44
	27	3.81	1.9	352.85	55.94	17.32	28.26	23.87	264.70
	Oct.	29	3.88	-1.8	352.78	56.08	-17.51	+29.49	-23.92	265.95
1		3.96	-1.8	352.67	56.27	-17.72	+30.67	-23.95	267.21

EPHEMERIS FOR PHYSICAL OBSERVATIONS OF MARS.

Mid-night.	k	Diameter.	i	q	Q	Central Meridian.		Mean Time of Transit of Zero Meridian.	
						Of Date.	Of Intermediate Date.	Of Date.	Of Intermediate Date.
								h m	h m
July	1	0.910	17.56	35.01	1.59	252.13	133.82	2 50.4	3 28.9
	3	0.913	17.92	34.31	1.56	252.31	115.07	4 7.4	4 45.9
	5	0.917	18.29	33.56	1.52	252.53	96.37	5 24.2	6 2.6
	7	0.920	18.66	32.76	1.48	252.78	77.71	6 40.9	7 19.2
	9	0.924	19.04	31.92	1.44	253.07	59.09	7 57.4	8 35.5
	11	0.928	19.41	31.04	1.39	253.40	40.53	9 13.6	9 51.6
	13	0.932	19.79	30.11	1.34	253.77	22.01	10 29.6	11 7.6
	15	0.937	20.18	29.13	1.28	254.20	3.54	11 45.5	12 23.3
	17	0.941	20.56	28.10	1.21	254.68	345.12	13 1.1	13 38.8
	19	0.945	20.94	27.03	1.14	255.22	326.75	14 16.5	14 54.1
	21	0.950	21.32	25.90	1.07	255.84	308.44	15 31.6	16 9.1
	23	0.954	21.69	24.72	0.99	256.54	290.18	16 46.5	17 23.9
	25	0.958	22.06	23.49	0.91	257.34	271.97	18 1.2	18 38.5
	27	0.963	22.42	22.22	0.83	258.25	253.82	19 15.7	19 52.8
	29	0.967	22.76	20.89	0.75	259.30	235.72	20 29.9	21 6.9
	31	0.971	23.10	19.52	0.66	260.52	217.68	21 43.9	22 20.8
Aug.	2	0.975	23.41	18.10	0.58	261.94	199.69	22 57.6	23 34.4
	4	0.979	23.71	16.65	0.50	263.63	181.75	..	0 11.2
	6	0.982	23.98	15.17	0.42	265.65	163.86	0 47.9	1 24.5
	8	0.986	24.23	13.66	0.34	268.14	146.00	2 1.1	2 37.7
	10	0.989	24.45	12.15	0.27	271.24	128.19	3 14.2	3 50.7
	12	0.991	24.65	10.64	0.21	275.22	110.42	4 27.2	5 3.6
	14	0.994	24.81	9.16	0.16	280.51	92.67	5 40.0	6 16.3
	16	0.995	24.94	7.76	0.11	287.74	74.95	6 52.6	7 28.9
	18	0.997	25.03	6.50	0.08	297.93	57.25	8 5.2	8 41.5
	20	0.998	25.09	5.51	0.06	312.33	39.57	9 17.8	9 54.0
	22	0.998	25.11	4.97	0.05	331.30	21.89	10 30.2	11 6.4
	24	0.998	25.09	5.04	0.05	351.12	4.22	11 42.7	12 18.9
	26	0.998	25.03	5.69	0.06	10.25	346.55	12 55.2	13 31.4
	28	0.997	24.93	6.75	0.09	23.72	328.87	14 7.7	14 43.9
	30	0.995	24.80	8.04	0.12	33.22	311.17	15 20.2	15 56.6
Sept.	1	0.993	24.64	9.47	0.17	40.00	293.45	16 32.9	17 9.3
	3	0.991	24.44	10.96	0.22	44.97	275.70	17 45.7	18 22.2
	5	0.988	24.21	12.47	0.28	48.76	257.92	18 58.7	19 35.2
	7	0.985	23.95	13.98	0.35	51.73	240.10	20 11.8	20 48.4
	9	0.982	23.67	15.47	0.43	54.11	222.24	21 25.1	22 1.8
	11	0.978	23.36	16.94	0.51	56.06	204.34	22 38.6	23 15.4
	13	0.975	23.03	18.38	0.59	57.69	186.38	23 52.3	..
	15	0.971	22.69	19.78	0.67	59.07	168.38	0 29.2	1 6.2
	17	0.966	22.34	21.13	0.75	60.25	150.33	1 43.2	2 20.3
	19	0.962	21.97	22.44	0.83	61.27	132.22	2 57.4	3 34.7
	21	0.958	21.59	23.71	0.91	62.15	114.07	4 11.9	4 49.2
	23	0.954	21.20	24.92	0.99	62.91	95.85	5 26.6	6 4.1
	25	0.949	20.81	26.08	1.06	63.58	77.59	6 41.6	7 19.1
	27	0.945	20.42	27.20	1.13	64.16	59.27	7 56.7	8 34.4
	29	0.940	20.02	28.26	1.19	64.67	40.89	9 12.1	9 49.9
Oct.	1	0.936	19.63	29.27	1.25	65.11	22.46	10 27.8	11 5.7

EPHEMERIS FOR PHYSICAL OBSERVATIONS OF MARS.

Midnight.	Light-Time.	Stellar Magnitude.	P	$A_{\oplus} + 18^{\circ}$	D_{\oplus}	$A_{\odot} - A_{\oplus}$	D_{\odot}	$\odot \delta$
	m							
Oct. 1	3.96	-1.8	352.67	56.27	-17.72	+30.67	-23.95	267.21
3	4.04	1.7	352.53	56.52	17.93	31.80	23.97	268.46
5	4.13	1.6	352.36	56.82	18.15	32.87	23.98	269.72
7	4.21	1.6	352.16	57.17	18.38	33.89	23.98	270.97
9	4.30	1.5	351.94	57.57	18.61	34.86	23.96	272.22
11	4.39	-1.5	351.69	58.02	-18.85	+35.78	-23.93	273.47
13	4.49	1.4	351.41	58.51	19.10	36.65	23.89	274.71
15	4.58	1.3	351.11	59.04	19.35	37.47	23.84	275.95
17	4.68	1.3	350.79	59.62	19.60	38.24	23.78	277.19
19	4.78	1.2	350.44	60.24	19.86	38.97	23.71	278.43
21	4.89	-1.2	350.07	60.90	-20.11	+39.66	-23.62	279.67
23	4.99	1.1	349.68	61.60	20.37	40.31	23.52	280.90
25	5.10	1.1	349.27	62.34	20.63	40.91	23.41	282.13
27	5.21	1.0	348.85	63.11	20.88	41.47	23.29	283.36
29	5.32	1.0	348.40	63.91	21.14	41.98	23.16	284.59
31	5.43	-0.9	347.94	64.76	-21.39	+42.46	-23.02	285.81
Nov. 2	5.54	0.8	347.47	65.63	21.64	42.90	22.87	287.03
4	5.66	0.8	346.98	66.54	21.88	43.30	22.71	288.25
6	5.78	0.7	346.48	67.47	22.12	43.67	22.53	289.46
8	5.89	0.7	345.96	68.44	22.35	44.00	22.35	290.67
10	6.01	-0.6	345.43	69.43	-22.58	+44.30	-22.16	291.88
12	6.14	0.6	344.90	70.44	22.80	44.57	21.96	293.08
14	6.26	0.5	344.35	71.48	23.01	44.80	21.74	294.29
16	6.38	0.5	343.80	72.55	23.22	45.00	21.52	295.48
18	6.51	0.4	343.24	73.63	23.42	45.18	21.29	296.68
20	6.64	-0.4	342.67	74.74	-23.60	+45.32	-21.06	297.87
22	6.77	0.3	342.10	75.87	23.78	45.43	20.81	299.06
24	6.90	0.3	341.52	77.02	23.95	45.52	20.55	300.24
26	7.03	0.2	340.94	78.19	24.11	45.58	20.29	301.42
28	7.16	0.2	340.35	79.38	24.26	45.62	20.02	302.60
30	7.29	-0.2	339.77	80.58	-24.39	+45.63	-19.74	303.78
Dec. 2	7.43	0.1	339.18	81.80	24.52	45.61	19.46	304.95
4	7.56	-0.1	338.59	83.04	24.63	45.57	19.17	306.12
6	7.70	0.0	338.00	84.29	24.73	45.51	18.87	307.28
8	7.84	0.0	337.41	85.55	24.81	45.43	18.56	308.44
10	7.98	+0.1	336.82	86.82	-24.89	+45.33	-18.25	309.60
12	8.12	0.1	336.24	88.11	24.95	45.21	17.93	310.75
14	8.26	0.1	335.66	89.41	25.00	45.07	17.61	311.90
16	8.40	0.2	335.09	90.71	25.03	44.92	17.28	313.04
18	8.54	0.2	334.52	92.03	25.05	44.74	16.94	314.18
20	8.68	+0.2	333.96	93.35	-25.06	+44.55	-16.60	315.32
22	8.83	0.3	333.40	94.68	25.06	44.35	16.26	316.45
24	8.97	0.3	332.85	96.02	25.04	44.13	15.91	317.58
26	9.12	0.4	332.31	97.36	25.00	43.90	15.56	318.71
28	9.26	0.4	331.78	98.71	24.95	43.65	15.20	319.83
30	9.41	+0.4	331.26	100.06	-24.89	+43.39	-14.84	320.95
32	9.56	+0.5	330.75	101.42	-24.81	+43.12	-14.47	322.07

EPHEMERIS FOR PHYSICAL OBSERVATIONS OF JUPITER.

Midnight.	Light-Time.	Stellar Magnitude.	P	$A_{\oplus} + 180^{\circ}$	D_{\oplus}	$A_{\odot} + 180^{\circ}$	D_{\odot}
	m						
Jen. 1	51.28	-1.3	9.01	112.53	-2.84	106.95	-2.94
8	50.73	1.4	8.40	113.95	2.83	107.50	2.93
15	50.10	1.4	7.80	115.31	2.83	108.04	2.92
22	49.41	1.4	7.23	116.61	2.83	108.59	2.91
29	48.66	1.4	6.68	117.84	2.82	109.14	2.90
Feb. 5	47.85	-1.5	6.17	118.99	-2.82	109.69	-2.89
12	46.99	1.5	5.70	120.05	2.81	110.24	2.88
19	46.10	1.6	5.27	121.00	2.81	110.79	2.87
26	45.18	1.6	4.88	121.85	2.81	111.34	2.86
Mar. 4	44.25	1.7	4.55	122.58	2.81	111.89	2.85
11	43.30	-1.7	4.28	123.17	-2.81	112.44	-2.84
18	42.36	1.8	4.07	123.63	2.81	113.00	2.83
25	41.44	1.8	3.92	123.95	2.81	113.55	2.81
Apr. 1	40.54	1.8	3.85	124.11	2.81	114.10	2.80
8	39.69	1.9	3.84	124.12	2.81	114.65	2.79
15	38.89	-1.9	3.90	123.98	-2.82	115.21	-2.78
22	38.16	2.0	4.04	123.69	2.82	115.76	2.76
29	37.50	2.0	4.24	123.26	2.82	116.31	2.75
May 6	36.94	2.1	4.49	122.70	2.82	116.87	2.74
13	36.48	2.1	4.80	122.02	2.82	117.42	2.72
20	36.12	-2.1	5.15	121.24	-2.82	117.98	-2.71
27	35.88	2.1	5.53	120.40	2.82	118.54	2.70
June 3	35.76	2.1	5.93	119.52	2.81	119.09	2.68
10	35.76	2.1	6.33	118.63	2.80	119.65	2.67
17	35.88	2.1	6.72	117.76	2.79	120.21	2.65
24	36.11	-2.1	7.09	116.94	-2.77	120.76	-2.64
July 1	36.46	2.1	7.42	116.19	2.76	121.32	2.62
8	36.91	2.1	7.70	115.54	2.74	121.88	2.61
15	37.46	2.0	7.93	115.02	2.71	122.44	2.59
22	38.09	2.0	8.11	114.63	2.69	123.00	2.57
29	38.80	-2.0	8.22	114.38	-2.67	123.56	-2.56
Aug. 5	39.56	1.9	8.26	114.28	2.65	124.12	2.54
12	40.38	1.9	8.24	114.33	2.62	124.68	2.52
19	41.23	1.8	8.15	114.53	2.60	125.24	2.51
26	42.10	1.8	8.00	114.88	2.58	125.80	2.49
Sept. 2	42.99	-1.7	7.79	115.36	-2.55	126.37	-2.47
9	43.88	1.7	7.52	115.99	2.53	126.93	2.45
16	44.76	1.7	7.19	116.74	2.51	127.49	2.44
23	45.62	1.6	6.81	117.60	2.48	128.06	2.42
30	46.46	1.6	6.37	118.57	2.46	128.62	2.40
Oct. 7	47.26	-1.5	5.89	119.65	-2.44	129.19	-2.38
14	48.01	1.5	5.36	120.81	2.42	129.75	2.36
21	48.71	1.5	4.80	122.05	2.39	130.32	2.34
28	49.35	1.4	4.20	123.37	2.37	130.89	2.32
Nov. 4	49.93	1.4	3.56	124.75	2.34	131.45	2.30
11	50.44	-1.4	2.90	126.19	-2.31	132.02	-2.28
18	50.87	-1.4	2.21	127.68	-2.29	132.59	-2.26

EPHEMERIS FOR PHYSICAL OBSERVATIONS OF JUPITER.

Midnight.	Equatorial Diameter.	Excess of Equat. Diam. over Polar.	δ	η	Q	Central Meridian.		Correction for Phase.
						System I.	System II.	
Jan. 1	31 ^h 9 ^m 1	2 ^h 12	5 ^h 58	0 ^h 08	280 ^h 15	257 ^h 53	351 ^h 41	+0 ^h 14
8	32 ^h 26	2 ^h 14	6 ^h 44	0 ^h 10	279 ^h 38	281 ^h 75	322 ^h 22	0 ^h 18
15	32 ^h 66	2 ^h 17	7 ^h 26	0 ^h 13	278 ^h 68	306 ^h 07	293 ^h 12	0 ^h 23
22	33 ^h 12	2 ^h 20	8 ^h 01	0 ^h 16	278 ^h 02	330 ^h 49	264 ^h 13	0 ^h 28
29	33 ^h 63	2 ^h 24	8 ^h 69	0 ^h 19	277 ^h 41	355 ^h 02	235 ^h 24	0 ^h 33
Feb. 5	34 ^h 20	2 ^h 27	9 ^h 29	0 ^h 22	276 ^h 84	19 ^h 66	206 ^h 47	+0 ^h 38
12	34 ^h 82	2 ^h 31	9 ^h 79	0 ^h 25	276 ^h 32	44 ^h 43	177 ^h 82	0 ^h 42
19	35 ^h 50	2 ^h 36	10 ^h 20	0 ^h 28	275 ^h 84	69 ^h 31	149 ^h 29	0 ^h 45
26	36 ^h 22	2 ^h 41	10 ^h 50	0 ^h 30	275 ^h 41	94 ^h 33	120 ^h 89	0 ^h 48
Mar. 4	36 ^h 98	2 ^h 46	10 ^h 67	0 ^h 32	275 ^h 03	119 ^h 47	92 ^h 62	0 ^h 49
11	37 ^h 79	2 ^h 51	10 ^h 71	0 ^h 33	274 ^h 70	144 ^h 75	64 ^h 49	+0 ^h 50
18	38 ^h 63	2 ^h 57	10 ^h 62	0 ^h 33	274 ^h 43	170 ^h 16	36 ^h 49	0 ^h 49
25	39 ^h 49	2 ^h 62	10 ^h 39	0 ^h 32	274 ^h 21	195 ^h 71	8 ^h 62	0 ^h 47
Apr. 1	40 ^h 36	2 ^h 68	10 ^h 00	0 ^h 31	274 ^h 04	221 ^h 39	340 ^h 88	0 ^h 44
8	41 ^h 23	2 ^h 74	9 ^h 46	0 ^h 28	273 ^h 93	247 ^h 20	313 ^h 28	0 ^h 39
15	42 ^h 08	2 ^h 80	8 ^h 77	0 ^h 25	273 ^h 87	273 ^h 13	285 ^h 79	+0 ^h 33
22	42 ^h 89	2 ^h 85	7 ^h 92	0 ^h 21	273 ^h 84	299 ^h 17	258 ^h 42	0 ^h 27
29	43 ^h 63	2 ^h 90	6 ^h 94	0 ^h 16	273 ^h 83	325 ^h 30	231 ^h 14	0 ^h 21
May 6	44 ^h 30	2 ^h 94	5 ^h 82	0 ^h 11	273 ^h 80	351 ^h 51	203 ^h 93	0 ^h 15
13	44 ^h 87	2 ^h 98	4 ^h 59	0 ^h 07	273 ^h 68	17 ^h 77	176 ^h 78	0 ^h 09
20	45 ^h 31	3 ^h 01	3 ^h 26	0 ^h 04	273 ^h 29	44 ^h 06	149 ^h 66	+0 ^h 05
27	45 ^h 61	3 ^h 03	1 ^h 87	0 ^h 01	271 ^h 88	70 ^h 35	122 ^h 54	+0 ^h 02
June 3	45 ^h 77	3 ^h 04	0 ^h 45	0 ^h 00	259 ^h 26	96 ^h 60	95 ^h 38	0 ^h 00
10	45 ^h 77	3 ^h 04	1 ^h 03	0 ^h 01	103 ^h 73	122 ^h 79	68 ^h 16	-0 ^h 01
17	45 ^h 61	3 ^h 03	2 ^h 45	0 ^h 02	99 ^h 82	148 ^h 89	40 ^h 85	0 ^h 03
24	45 ^h 31	3 ^h 01	3 ^h 83	0 ^h 05	99 ^h 02	174 ^h 87	13 ^h 42	-0 ^h 06
July 1	44 ^h 88	2 ^h 98	5 ^h 13	0 ^h 09	98 ^h 78	200 ^h 70	345 ^h 85	0 ^h 11
8	44 ^h 33	2 ^h 95	6 ^h 33	0 ^h 13	98 ^h 72	226 ^h 37	318 ^h 11	0 ^h 17
15	43 ^h 68	2 ^h 90	7 ^h 42	0 ^h 18	98 ^h 71	251 ^h 86	290 ^h 19	0 ^h 24
22	42 ^h 96	2 ^h 85	8 ^h 37	0 ^h 23	98 ^h 71	277 ^h 17	262 ^h 09	0 ^h 31
29	42 ^h 18	2 ^h 80	9 ^h 17	0 ^h 27	98 ^h 69	302 ^h 29	233 ^h 81	-0 ^h 37
Aug. 5	41 ^h 36	2 ^h 75	9 ^h 83	0 ^h 30	98 ^h 64	327 ^h 23	205 ^h 33	0 ^h 42
12	40 ^h 53	2 ^h 69	10 ^h 34	0 ^h 33	98 ^h 54	351 ^h 98	176 ^h 68	0 ^h 46
19	39 ^h 69	2 ^h 64	10 ^h 70	0 ^h 35	98 ^h 40	16 ^h 56	147 ^h 86	0 ^h 50
26	38 ^h 87	2 ^h 58	10 ^h 92	0 ^h 35	98 ^h 21	40 ^h 98	118 ^h 87	0 ^h 52
Sept. 2	38 ^h 07	2 ^h 53	10 ^h 99	0 ^h 35	97 ^h 97	65 ^h 25	89 ^h 73	-0 ^h 53
9	37 ^h 29	2 ^h 48	10 ^h 93	0 ^h 34	97 ^h 68	89 ^h 38	60 ^h 46	0 ^h 52
16	36 ^h 56	2 ^h 43	10 ^h 75	0 ^h 32	97 ^h 34	113 ^h 40	31 ^h 07	0 ^h 50
23	35 ^h 87	2 ^h 38	10 ^h 45	0 ^h 30	96 ^h 95	137 ^h 31	1 ^h 58	0 ^h 47
30	35 ^h 22	2 ^h 34	10 ^h 04	0 ^h 27	96 ^h 52	161 ^h 13	331 ^h 99	0 ^h 44
Oct. 7	34 ^h 63	2 ^h 30	9 ^h 53	0 ^h 24	96 ^h 05	184 ^h 87	302 ^h 32	-0 ^h 40
14	34 ^h 09	2 ^h 27	8 ^h 94	0 ^h 21	95 ^h 53	208 ^h 54	272 ^h 60	0 ^h 35
21	33 ^h 60	2 ^h 23	8 ^h 26	0 ^h 18	94 ^h 98	232 ^h 17	242 ^h 82	0 ^h 30
28	33 ^h 16	2 ^h 20	7 ^h 51	0 ^h 14	94 ^h 39	255 ^h 76	213 ^h 00	0 ^h 25
Nov. 4	32 ^h 78	2 ^h 18	6 ^h 69	0 ^h 11	93 ^h 77	279 ^h 33	183 ^h 16	0 ^h 20
11	32 ^h 45	2 ^h 16	5 ^h 82	0 ^h 08	93 ^h 10	302 ^h 88	153 ^h 31	-0 ^h 15
18	32 ^h 17	2 ^h 14	4 ^h 91	0 ^h 06	92 ^h 40	326 ^h 43	123 ^h 45	-0 ^h 11

EPHEMERIS FOR PHYSICAL OBSERVATIONS OF JUPITER.
SYSTEM I.

Transit of Zero Meridian.				Interval between Successive Transits.		Transit of Zero Meridian.				Interval between Successive Transits.			
	d	h	m		h	m		d	h	m		h	m
Jan.	1	14	47.89		9	50.60		Mar.	21	14	3.94	9	50.47
	3	16	0.90					23	15	16.32			
	5	17	13.90					25	16	28.69			
	7	18	26.89					27	17	41.05			
	9	19	39.86					29	18	53.38			
	11	20	52.82	9	50.58		Apr.	31	20	5.70	9	50.45	
	13	22	5.76					2	21	18.00			
	15	23	18.69					4	22	30.29			
	18	0	31.60					6	23	42.56			
	20	1	44.50					9	0	54.82			
	22	2	57.38	9	50.57			11	2	7.06	9	50.44	
	24	4	10.25					13	3	19.28			
	26	5	23.10					15	4	31.49			
	28	6	35.94					17	5	43.68			
	30	7	48.76					19	6	55.86			
Feb.	1	9	1.57	9	50.55			21	8	8.03	9	50.43	
	3	10	14.36					23	9	20.18			
	5	11	27.13					25	10	32.32			
	7	12	39.89					27	11	44.45			
	9	13	52.63					29	12	56.57			
	11	15	5.35	9	50.54		May	1	14	8.68	9	50.42	
	13	16	18.06					3	15	20.77			
	15	17	30.76					5	16	32.85			
	17	18	43.43					7	17	44.93			
	19	19	56.09					9	18	57.00			
	21	21	8.73	9	50.52			11	20	9.06	9	50.41	
	23	22	21.36					13	21	21.12			
	25	23	33.97					15	22	33.17			
	28	0	46.56					17	23	45.21			
	Mar.	1	1					59.13	20	0			57.26
3	3	11.69	9	50.50			22	2	9.30	9	50.41		
5	4	24.23					24	3	21.34				
7	5	36.76					26	4	33.38				
9	6	49.26					28	5	45.42				
11	8	1.75					30	6	57.46				
13	9	14.22	9	50.49		June	1	8	9.51	9	50.42		
15	10	26.68					3	9	21.56				
17	11	39.12					5	10	33.63				
19	12	51.54					7	11	45.70				

EPHEMERIS FOR PHYSICAL OBSERVATIONS OF JUPITER.
SYSTEM I.—*continued.*

Transit of Zero Meridian.				Interval between Successive Transits.		Transit of Zero Meridian.				Interval between Successive Transits.			
	d	h	m		h	m		d	h	m		h	m
June	9	12	57.78	9	50.44			Aug.	28	12	6.60	9	50.61
	11	14	9.88					30	13	19.59			
	13	15	21.99					Sept.	1	14	32.61		
	15	16	34.12					3	15	45.64			
	17	17	46.27					5	16	58.68			
	19	18	58.44					7	18	11.75			
	21	20	10.63					9	19	24.83			
	23	21	22.85					11	20	37.92			
	25	22	35.08					13	21	51.03			
	27	23	47.34					15	23	4.15			
July	30	0	59.62	9	50.48			18	0	17.29	9	50.64	
	2	2	11.92					20	1	30.44			
	4	3	24.25					22	2	43.60			
	6	4	36.61					24	3	56.77			
	8	5	48.99					26	5	9.96			
	10	7	1.39					28	6	23.16			
	12	8	13.82					30	7	36.37			
	14	9	26.28					Oct.	2	8			49.58
	16	10	38.76					4	10	2.81			
	18	11	51.27					6	11	16.04			
	20	13	3.80	9	50.53			8	12	29.29	9	50.65	
	22	14	16.36					10	13	42.54			
	24	15	28.95					12	14	55.80			
	26	16	41.56					14	16	9.07			
	28	17	54.20					16	17	22.34			
	30	19	6.86					18	18	35.62			
	1	20	19.55					20	19	48.90			
	3	21	32.26					22	21	2.19			
	5	22	45.00					24	22	15.49			
	7	23	57.76					26	23	28.79			
	10	1	10.55	9	50.57			29	0	42.09	9	50.66	
	12	2	23.36					31	1	55.39			
	14	3	36.19					Nov.	2	3			8.70
	16	4	49.04					4	4	22.02			
	18	6	1.92					6	5	35.33			
	20	7	14.81					8	6	48.65			
	22	8	27.73					10	8	1.97			
	24	9	40.67					12	9	15.29			
	26	10	53.63					14	10	28.61			

**EPHEMERIS FOR PHYSICAL OBSERVATIONS OF JUPITER.
SYSTEM II.**

Transit of Zero Meridian.				Interval between Successive Transits.		Transit of Zero Meridian.				Interval between Successive Transits.			
	d	h	m		h	m		d	h	m		h	m
Jan.	1	12	13.99	9	55.78			22	4	19.74	9	55.65	
	3	13	52.90					24	5	58.01			
	5	15	31.80					26	7	36.26			
	7	17	10.68					28	9	14.49			
	9	18	49.55					30	10	52.71			
	11	20	28.40	9	55.76			Apr. 1	12	30.91	9	55.63	
	13	22	7.24					3	14	9.09			
	15	23	46.06					5	15	47.25			
	18	1	24.87					7	17	25.40			
	20	3	3.66					9	19	3.53			
22	4	42.44	9	55.75			11	20	41.65	9	55.61		
24	6	21.20					13	22	19.75				
26	7	59.94					15	23	57.84				
28	9	38.67					18	1	35.91				
30	11	17.39					20	3	13.96				
Feb.	1	12	56.09	9	55.73			22	4	52.01	9	55.60	
	3	14	34.77					24	6	30.04			
	5	16	13.43					26	8	8.05			
	7	17	52.08					28	9	46.06			
	9	19	30.71					30	11	24.05			
	11	21	9.33	9	55.72			May 2	13	2.03	9	55.59	
	13	22	47.93					4	14	40.00			
	16	0	26.51					6	16	17.96			
	18	2	5.07					8	17	55.91			
	20	3	43.62					10	19	33.85			
22	5	22.15	9	55.70			12	21	11.79	9	55.58		
24	7	0.67					14	22	49.72				
26	8	39.16					17	0	27.65				
28	10	17.64					19	2	5.57				
Mar. 1	11	56.10					21	3	43.50				
3	13	34.54	9	55.68			23	5	21.42	9	55.59		
5	15	12.97					25	6	59.33				
7	16	51.38					27	8	37.25				
9	18	29.77					29	10	15.17				
11	20	8.14					31	11	53.09				
13	21	46.50	9	55.66			June 2	13	31.02	9	55.60		
15	23	24.83					4	15	8.96				
18	1	3.15					6	16	46.91				
20	2	41.46					8	18	24.86				

EPHEMERIS FOR PHYSICAL OBSERVATIONS OF JUPITER.
SYSTEM II.—*continued.*

Transit of Zero Meridian.			Interval between Successive Transits.		Transit of Zero Meridian.			Interval between Successive Transits.										
	d	h	m		h	m		d	h	m		h	m					
June	10	20	2.83	9	55.62			Aug.	30	12	1.89	9	55.79					
	12	21	40.82			Sept.	1	13	40.80									
	14	23	18.82				3	15	19.72									
	17	0	56.85				5	16	58.66									
	19	2	34.89				7	18	37.62									
	21	4	12.95				9	20	16.59									
	23	5	51.04				11	21	55.58									
	25	7	29.15				13	23	34.58									
	27	9	7.28				16	1	13.60									
	29	10	45.43				18	2	52.63									
July	1	12	23.61	9	55.66				20	4	31.68	9	55.82					
	3	14	1.81				22	6	10.74									
	5	15	40.04				24	7	49.81									
	7	17	18.30				26	9	28.89									
	9	18	56.58				28	11	7.98									
	11	20	34.88				30	12	47.08									
	13	22	13.22			Oct.	2	14	26.20									
	15	23	51.58				4	16	5.32									
	18	1	29.97				6	17	44.46									
	20	3	8.38				8	19	23.60									
	22	4	46.82	9	55.72				10	21	2.75	9	55.84					
	24	6	25.29				12	22	41.91									
	26	8	3.78				15	0	21.07									
	28	9	42.30				17	2	0.24									
	30	11	20.85				19	3	39.42									
	Aug.	1	12			59.42	9	55.73						21	5	18.60	9	55.84
		3	14			38.02				23	6			57.79				
		5	16			16.64				25	8			36.99				
		7	17			55.29				27	10			16.18				
		9	19			33.96				29	11			55.38				
11		21	12.65		31	13			34.59									
13		22	51.37	Nov.	2	15			13.80									
16		0	30.11		4	16			53.01									
18		2	8.87		6	18			32.23									
20		3	47.66		8	20			11.44									
	22	5	26.47	9	55.77				10	21	50.66	9	55.84					
	24	7	5.29				12	23	29.88									
	26	8	44.14				15	1	9.10									
	28	10	23.01				17	2	48.32									

For converting INTERVALS of MEAN SOLAR Time into Equivalent INTERVALS of
SIDEREAL Time.

HOURS.				MINUTES.				SECONDS.					
Hours of Mean Time.	Equivalents in Sidereal Time.			Minutes of Mean Time.	Equivalents in Sidereal Time.		Minutes of Mean Time.	Equivalents in Sidereal Time.		Seconds of Mean Time.	Equivalents in Sidereal Time.		
	h	m	s		m	s		m	s		s		s
1	1	0	9.8565	1	1	0.1643	31	31	5.0925	1	1.0027	31	31.0849
2	2	0	19.7130	2	2	0.3286	32	32	5.2568	2	2.0055	32	32.0876
3	3	0	29.5694	3	3	0.4928	33	33	5.4211	3	3.0082	33	33.0904
4	4	0	39.4259	4	4	0.6571	34	34	5.5853	4	4.0110	34	34.0931
5	5	0	49.2824	5	5	0.8214	35	35	5.7496	5	5.0137	35	35.0958
6	6	0	59.1388	6	6	0.9857	36	36	5.9139	6	6.0164	36	36.0986
7	7	1	8.9953	7	7	1.1499	37	37	6.0782	7	7.0192	37	37.1013
8	8	1	18.8518	8	8	1.3142	38	38	6.2424	8	8.0219	38	38.1040
9	9	1	28.7083	9	9	1.4785	39	39	6.4067	9	9.0246	39	39.1068
10	10	1	38.5647	10	10	1.6428	40	40	6.5710	10	10.0274	40	40.1095
11	11	1	48.4212	11	11	1.8070	41	41	6.7353	11	11.0301	41	41.1123
12	12	1	58.2777	12	12	1.9713	42	42	6.8995	12	12.0329	42	42.1150
13	13	2	8.1342	13	13	2.1356	43	43	7.0638	13	13.0356	43	43.1177
14	14	2	17.9906	14	14	2.2998	44	44	7.2281	14	14.0383	44	44.1205
15	15	2	27.8471	15	15	2.4641	45	45	7.3924	15	15.0411	45	45.1232
16	16	2	37.7036	16	16	2.6284	46	46	7.5566	16	16.0438	46	46.1259
17	17	2	47.5600	17	17	2.7927	47	47	7.7209	17	17.0465	47	47.1287
18	18	2	57.4165	18	18	2.9569	48	48	7.8852	18	18.0493	48	48.1314
19	19	3	7.2730	19	19	3.1212	49	49	8.0495	19	19.0520	49	49.1342
20	20	3	17.1295	20	20	3.2855	50	50	8.2137	20	20.0548	50	50.1369
21	21	3	26.9859	21	21	3.4498	51	51	8.3780	21	21.0575	51	51.1396
22	22	3	36.8424	22	22	3.6140	52	52	8.5423	22	22.0602	52	52.1424
23	23	3	46.6989	23	23	3.7783	53	53	8.7066	23	23.0630	53	53.1451
24	24	3	56.5554	24	24	3.9426	54	54	8.8708	24	24.0657	54	54.1479
				25	25	4.1069	55	55	9.0351	25	25.0685	55	55.1506
				26	26	4.2711	56	56	9.1994	26	26.0712	56	56.1533
				27	27	4.4354	57	57	9.3637	27	27.0739	57	57.1561
				28	28	4.5997	58	58	9.5279	28	28.0767	58	58.1588
				29	29	4.7640	59	59	9.6922	29	29.0794	59	59.1615
				30	30	4.9282	60	60	9.8565	30	30.0821	60	60.1643

For converting INTERVALS of MEAN SOLAR Time into Equivalent INTERVALS of
SIDEREAL Time.

FRACTIONS OF A SECOND.

Seconds of Mean Time.	Equivalents in Sidereal Time.	Seconds of Mean Time.	Equivalents in Sidereal Time.	Seconds of Mean Time.	Equivalents in Sidereal Time.	Seconds of Mean Time.	Equivalents in Sidereal Time.	Seconds of Mean Time.	Equivalents in Sidereal Time.
0.01	^s 0.01003	0.21	^s 0.21057	0.41	^s 0.41112	0.61	^s 0.61167	0.81	^s 0.81222
0.02	0.02006	0.22	0.22060	0.42	0.42115	0.62	0.62170	0.82	0.82225
0.03	0.03008	0.23	0.23063	0.43	0.43118	0.63	0.63173	0.83	0.83227
0.04	0.04011	0.24	0.24066	0.44	0.44120	0.64	0.64175	0.84	0.84230
0.05	0.05014	0.25	0.25068	0.45	0.45123	0.65	0.65178	0.85	0.85233
0.06	0.06016	0.26	0.26071	0.46	0.46126	0.66	0.66181	0.86	0.86235
0.07	0.07019	0.27	0.27074	0.47	0.47129	0.67	0.67183	0.87	0.87238
0.08	0.08022	0.28	0.28077	0.48	0.48131	0.68	0.68186	0.88	0.88241
0.09	0.09025	0.29	0.29079	0.49	0.49134	0.69	0.69189	0.89	0.89244
0.10	0.10027	0.30	0.30082	0.50	0.50137	0.70	0.70192	0.90	0.90246
0.11	0.11030	0.31	0.31085	0.51	0.51140	0.71	0.71194	0.91	0.91249
0.12	0.12033	0.32	0.32088	0.52	0.52142	0.72	0.72197	0.92	0.92252
0.13	0.13036	0.33	0.33090	0.53	0.53145	0.73	0.73200	0.93	0.93255
0.14	0.14038	0.34	0.34093	0.54	0.54148	0.74	0.74203	0.94	0.94257
0.15	0.15041	0.35	0.35096	0.55	0.55151	0.75	0.75205	0.95	0.95260
0.16	0.16044	0.36	0.36099	0.56	0.56153	0.76	0.76208	0.96	0.96263
0.17	0.17047	0.37	0.37101	0.57	0.57156	0.77	0.77211	0.97	0.97266
0.18	0.18049	0.38	0.38104	0.58	0.58159	0.78	0.78214	0.98	0.98268
0.19	0.19052	0.39	0.39107	0.59	0.59162	0.79	0.79216	0.99	0.99271
0.20	0.20055	0.40	0.40110	0.60	0.60164	0.80	0.80219	1.00	1.00274

Sidereal Time *required* = Sidereal Time at the *preceding* Mean Noon + the Equivalent to the *given* Mean Time.

EXAMPLE.—To convert 2^h 25^m 18^s.96 Mean Time at Greenwich, Jan. 20, 1924, into Sidereal Time.

Sidereal Time at the <i>preceding</i> Mean Noon, viz., January 20 .		h m s	
		19 54 24.28	
For Mean Intervals {	{ 2 ^h 25 ^m 18 ^s .96 }	the Table gives the Equivalent	
		Sidereal Intervals {	
		25 4.107	
		18.049	
		0.963	
The Sum is the Sidereal Time required		22 20 7.11	

For converting INTERVALS of SIDEREAL Time into Equivalent INTERVALS of
MEAN SOLAR Time.

HOURS.			MINUTES.				SECONDS.				
Hours of Sidereal Time.	Equivalents in Mean Time.		Minutes of Sidereal Time.	Equivalents in Mean Time.		Minutes of Sidereal Time.	Equivalents in Mean Time.		Seconds of Sidereal Time.	Equivalents in Mean Time.	
	h	m	s		m	s		m	s		s
1	0	59	50.1704	1	0	59.8362	31	30	54.9214	1	0.9973
2	1	59	40.3409	2	1	59.6723	32	31	54.7576	2	1.9945
3	2	59	30.5113	3	2	59.5085	33	32	54.5937	3	2.9918
4	3	59	20.6818	4	3	59.3447	34	33	54.4299	4	3.9891
5	4	59	10.8522	5	4	59.1809	35	34	54.2661	5	4.9864
6	5	59	1.0226	6	5	59.0170	36	35	54.1023	6	5.9836
7	6	58	51.1931	7	6	58.8532	37	36	53.9384	7	6.9809
8	7	58	41.3635	8	7	58.6894	38	37	53.7746	8	7.9782
9	8	58	31.5340	9	8	58.5256	39	38	53.6108	9	8.9754
10	9	58	21.7044	10	9	58.3617	40	39	53.4470	10	9.9727
11	10	58	11.8748	11	10	58.1979	41	40	53.2831	11	10.9700
12	11	58	2.0453	12	11	58.0341	42	41	53.1193	12	11.9672
13	12	57	52.2157	13	12	57.8703	43	42	52.9555	13	12.9645
14	13	57	42.3862	14	13	57.7064	44	43	52.7917	14	13.9618
15	14	57	32.5566	15	14	57.5426	45	44	52.6278	15	14.9591
16	15	57	22.7270	16	15	57.3788	46	45	52.4640	16	15.9563
17	16	57	12.8975	17	16	57.2150	47	46	52.3002	17	16.9536
18	17	57	3.0679	18	17	57.0511	48	47	52.1364	18	17.9509
19	18	56	53.2384	19	18	56.8873	49	48	51.9725	19	18.9481
20	19	56	43.4088	20	19	56.7235	50	49	51.8087	20	19.9454
21	20	56	33.5792	21	20	56.5597	51	50	51.6449	21	20.9427
22	21	56	23.7497	22	21	56.3958	52	51	51.4810	22	21.9399
23	22	56	13.9201	23	22	56.2320	53	52	51.3172	23	22.9372
24	23	56	4.0906	24	23	56.0682	54	53	51.1534	24	23.9345
				25	24	55.9044	55	54	50.9896	25	24.9318
				26	25	55.7405	56	55	50.8257	26	25.9290
				27	26	55.5767	57	56	50.6619	27	26.9263
				28	27	55.4129	58	57	50.4981	28	27.9236
				29	28	55.2490	59	58	50.3343	29	28.9208
				30	29	55.0852	60	59	50.1704	30	29.9181

For converting INTERVALS of SIDEREAL Time into Equivalent INTERVALS of
MEAN SOLAR Time.

FRACTIONS OF A SECOND.

Seconds of Sidereal Time.	Equivalents in Mean Time.	Seconds of Sidereal Time.	Equivalents in Mean Time.	Seconds of Sidereal Time.	Equivalents in Mean Time.	Seconds of Sidereal Time.	Equivalents in Mean Time.	Seconds of Sidereal Time.	Equivalents in Mean Time.
0.01	^s 0.00997	0.21	^s 0.20943	0.41	^s 0.40888	0.61	^s 0.60833	0.81	^s 0.80779
0.02	0.01995	0.22	0.21940	0.42	0.41885	0.62	0.61831	0.82	0.81776
0.03	0.02992	0.23	0.22937	0.43	0.42883	0.63	0.62828	0.83	0.82773
0.04	0.03989	0.24	0.23934	0.44	0.43880	0.64	0.63825	0.84	0.83771
0.05	0.04986	0.25	0.24932	0.45	0.44877	0.65	0.64823	0.85	0.84768
0.06	0.05984	0.26	0.25929	0.46	0.45874	0.66	0.65820	0.86	0.85765
0.07	0.06981	0.27	0.26926	0.47	0.46872	0.67	0.66817	0.87	0.86762
0.08	0.07978	0.28	0.27924	0.48	0.47869	0.68	0.67814	0.88	0.87760
0.09	0.08975	0.29	0.28921	0.49	0.48866	0.69	0.68812	0.89	0.88757
0.10	0.09973	0.30	0.29918	0.50	0.49864	0.70	0.69809	0.90	0.89754
0.11	0.10970	0.31	0.30915	0.51	0.50861	0.71	0.70806	0.91	0.90752
0.12	0.11967	0.32	0.31913	0.52	0.51858	0.72	0.71803	0.92	0.91749
0.13	0.12965	0.33	0.32910	0.53	0.52855	0.73	0.72801	0.93	0.92746
0.14	0.13962	0.34	0.33907	0.54	0.53853	0.74	0.73798	0.94	0.93743
0.15	0.14959	0.35	0.34904	0.55	0.54850	0.75	0.74795	0.95	0.94741
0.16	0.15956	0.36	0.35902	0.56	0.55847	0.76	0.75793	0.96	0.95738
0.17	0.16954	0.37	0.36899	0.57	0.56844	0.77	0.76790	0.97	0.96735
0.18	0.17951	0.38	0.37896	0.58	0.57842	0.78	0.77787	0.98	0.97732
0.19	0.18948	0.39	0.38894	0.59	0.58839	0.79	0.78784	0.99	0.98730
0.20	0.19945	0.40	0.39891	0.60	0.59836	0.80	0.79782	1.00	0.99727

Mean Solar Time *required* = Mean Time at the *preceding* Sidereal Noon (Mean Time of Transit of the First Point of Aries, page III) + the Equivalent to the *given* Sidereal Time.

EXAMPLE.—To convert 22^h 20^m 7^s.11 Sidereal Time at Greenwich, Jan. 20, 1924, into Mean Time.

Mean Time at the <i>preceding</i> Sidereal Noon, viz., January 19	-	-	-	h	m	s
				4	8	51.39
For Sidereal	22 ^h	0 ^m	0 ^s	21	56	23.750
Intervals	20	0		19	56	7.24
	7					6.981
	0.11					0.110
the Table gives the Equivalent						
Mean Intervals						
The Sum is the Mean Time required, Jan. 20				2	25	18.96

586 DAY OF THE YEAR, &c., 1924.

DAY AND FRACTION OF THE YEAR FROM MEAN NOON OF JAN. 1.

Day of the Month.	JANUARY.		FEBRUARY.		MARCH.		APRIL.		MAY.		JUNE.	
	Day of the Year.	Fraction of the Year.*	Day of the Year.	Fraction of the Year.*	Day of the Year.	Fraction of the Year.*	Day of the Year.	Fraction of the Year.*	Day of the Year.	Fraction of the Year.*	Day of the Year.	Fraction of the Year.*
1	0	·0000	31	·0849	60	·1643	91	·2492	121	·3313	152	·4162
2	1	·0027	32	·0876	61	·1670	92	·2519	122	·3340	153	·4189
3	2	·0055	33	·0904	62	·1698	93	·2546	123	·3368	154	·4216
4	3	·0082	34	·0931	63	·1725	94	·2574	124	·3395	155	·4244
5	4	·0110	35	·0958	64	·1752	95	·2601	125	·3422	156	·4271
6	5	·0137	36	·0986	65	·1780	96	·2628	126	·3450	157	·4299
7	6	·0164	37	·1013	66	·1807	97	·2656	127	·3477	158	·4326
8	7	·0192	38	·1040	67	·1834	98	·2683	128	·3504	159	·4353
9	8	·0219	39	·1068	68	·1862	99	·2711	129	·3532	160	·4381
10	9	·0246	40	·1095	69	·1889	100	·2738	130	·3559	161	·4408
11	10	·0274	41	·1123	70	·1917	101	·2765	131	·3587	162	·4435
12	11	·0301	42	·1150	71	·1944	102	·2793	132	·3614	163	·4463
13	12	·0329	43	·1177	72	·1971	103	·2820	133	·3641	164	·4490
14	13	·0356	44	·1205	73	·1999	104	·2847	134	·3669	165	·4518
15	14	·0383	45	·1232	74	·2026	105	·2875	135	·3696	166	·4545
16	15	·0411	46	·1259	75	·2053	106	·2902	136	·3724	167	·4572
17	16	·0438	47	·1287	76	·2081	107	·2930	137	·3751	168	·4600
18	17	·0465	48	·1314	77	·2108	108	·2957	138	·3778	169	·4627
19	18	·0493	49	·1342	78	·2136	109	·2984	139	·3806	170	·4654
20	19	·0520	50	·1369	79	·2163	110	·3012	140	·3833	171	·4682
21	20	·0548	51	·1396	80	·2190	111	·3039	141	·3860	172	·4709
22	21	·0575	52	·1424	81	·2218	112	·3066	142	·3888	173	·4737
23	22	·0602	53	·1451	82	·2245	113	·3094	143	·3915	174	·4764
24	23	·0630	54	·1478	83	·2272	114	·3121	144	·3943	175	·4791
25	24	·0657	55	·1506	84	·2300	115	·3149	145	·3970	176	·4819
26	25	·0684	56	·1533	85	·2327	116	·3176	146	·3997	177	·4846
27	26	·0712	57	·1561	86	·2355	117	·3203	147	·4025	178	·4873
28	27	·0739	58	·1588	87	·2382	118	·3231	148	·4052	179	·4901
29	28	·0767	59	·1615	88	·2409	119	·3258	149	·4079	180	·4928
30	29	·0794			89	·2437	120	·3285	150	·4107	181	·4956
31	30	·0821			90	·2464			151	·4134		

*Subtract ·0003 if Fraction of the Year be required from the time when the Sun's Mean Longitude is 280°.

DAY AND FRACTION OF THE YEAR FROM MEAN NOON OF JAN. 1.

Day of the Month.	JULY.		AUGUST.		SEPTEMBER.		OCTOBER.		NOVEMBER.		DECEMBER.	
	Day of the Year.	Fraction of the Year.*	Day of the Year.	Fraction of the Year.*	Day of the Year.	Fraction of the Year.*	Day of the Year.	Fraction of the Year.*	Day of the Year.	Fraction of the Year.*	Day of the Year.	Fraction of the Year.*
1	182	·4983	213	·5832	244	·6681	274	·7502	305	·8351	335	·9172
2	183	·5010	214	·5859	245	·6708	275	·7529	306	·8378	336	·9199
3	184	·5038	215	·5887	246	·6735	276	·7557	307	·8405	337	·9227
4	185	·5065	216	·5914	247	·6763	277	·7584	308	·8433	338	·9254
5	186	·5093	217	·5941	248	·6790	278	·7611	309	·8460	339	·9282
6	187	·5120	218	·5969	249	·6817	279	·7639	310	·8488	340	·9309
7	188	·5147	219	·5996	250	·6845	280	·7666	311	·8515	341	·9336
8	189	·5175	220	·6023	251	·6872	281	·7694	312	·8542	342	·9364
9	190	·5202	221	·6051	252	·6900	282	·7721	313	·8570	343	·9391
10	191	·5229	222	·6078	253	·6927	283	·7748	314	·8597	344	·9418
11	192	·5257	223	·6106	254	·6954	284	·7776	315	·8624	345	·9446
12	193	·5284	224	·6133	255	·6982	285	·7803	316	·8652	346	·9473
13	194	·5312	225	·6160	256	·7009	286	·7830	317	·8679	347	·9501
14	195	·5339	226	·6188	257	·7036	287	·7858	318	·8707	348	·9528
15	196	·5366	227	·6215	258	·7064	288	·7885	319	·8734	349	·9555
16	197	·5394	228	·6242	259	·7091	289	·7913	320	·8761	350	·9583
17	198	·5421	229	·6270	260	·7119	290	·7940	321	·8789	351	·9610
18	199	·5448	230	·6297	261	·7146	291	·7967	322	·8816	352	·9637
19	200	·5476	231	·6325	262	·7173	292	·7995	323	·8843	353	·9665
20	201	·5503	232	·6352	263	·7201	293	·8022	324	·8871	354	·9692
21	202	·5531	233	·6379	264	·7228	294	·8049	325	·8898	355	·9720
22	203	·5558	234	·6407	265	·7255	295	·8077	326	·8926	356	·9747
23	204	·5585	235	·6434	266	·7283	296	·8104	327	·8953	357	·9774
24	205	·5613	236	·6461	267	·7310	297	·8132	328	·8980	358	·9802
25	206	·5640	237	·6489	268	·7338	298	·8159	329	·9008	359	·9829
26	207	·5667	238	·6516	269	·7365	299	·8186	330	·9035	360	·9856
27	208	·5695	239	·6544	270	·7392	300	·8214	331	·9062	361	·9884
28	209	·5722	240	·6571	271	·7420	301	·8241	332	·9090	362	·9911
29	210	·5750	241	·6598	272	·7447	302	·8268	333	·9117	363	·9939
30	211	·5777	242	·6626	273	·7474	303	·8296	334	·9145	364	·9966
31	212	·5804	243	·6653			304	·8323			365	·9993

* Subtract ·0003 if Fraction of the Year be required from the time when the Sun's Mean Longitude is 280°.

Days elapsed at Mean Noon of Jan. 1 of each year of the Table.											Days elapsed at Mean Noon.	
A.D.	0	200	400	600	800	1000	1200	1400	1600	1800		
	I7	I7	I8	I9	20	20	21	22	23	23	Date.	1924.
0	21058	94108	67158	40208	13258	86308	59358	32408	05448	78497*		
4	22519	95569	68619	41669	14719	87769	60819	33869	06909	79957	Jan. 1	242
8	23980	97030	70080	43130	16180	89230	62280	35330	08370	81418	11	3786
12	25441	98491	71541	44591	17641	90691	63741	36791	09831	82879	21	3796
16	26902	99952	73002	46052	19102	92152	65202	38252	11292	84340	31	3806
20	28363	01413	74463	47513	20563	93613	66663	39713	12753	85801	Feb. 10	3816
24	29824	02874	75924	48974	22024	95074	68124	41174	14214	87262	20	3826
28	31285	04335	77385	50435	23485	96535	69585	42635	15675	88723	Mar. 1	3836
32	32746	05796	78846	51896	24946	97996	71046	44096	17136	90184	11	3846
36	34207	07257	80307	53357	26407	99457	72507	45557	18597	91645	21	3856
40	35668	08718	81768	54818	27868	00918	73968	47018	20058	93106	31	3866
44	37129	10179	83229	56279	29329	02379	75429	48479	21519	94567	Apr. 10	3876
48	38590	11640	84690	57740	30790	03840	76890	49940	22980	96028	20	3886
52	40051	13101	86151	59201	32251	05301	78351	51401	24441	97489	30	3896
56	41512	14562	87612	60662	33712	06762	79812	52862	25902	98950	10	3906
60	42973	16023	89073	62123	35173	08223	81273	54323	27363	00411	20	3916
64	44434	17484	90534	63584	36634	09684	82734	55784	28824	01872	30	3926
68	45895	18945	91995	65045	38095	11145	84195	57245	30285	03333	9	3936
72	47356	20406	93456	66506	39556	12606	85656	58706	31746	04794	19	3946
76	48817	21867	94917	67967	41017	14067	87117	60167	33207	06255	29	3956
80	50278	23328	96378	69428	42478	15528	88578	61628	34668	07716	9	3966
84	51739	24789	97839	70889	43939	16989	90039	63089	36129	09177	19	3976
88	53200	26250	99300	72350	45400	18450	91500	64550	37590	10638	29	3986
92	54661	27711	00761	73811	46861	19911	92961	66011	39051	12099	9	3996
96	56122	29172	02222	75272	48322	21372	94422	67472	40512	13560	19	4006
100	57583	30633	03683	76733	49783	22833	95883	68933	41973*	15021*	29	4016
104	59044	32094	05144	78194	51244	24294	97344	70394	43433	16481	8	4026
108	60505	33555	06605	79655	52705	25755	98805	71855	44894	17942	18	4036
112	61966	35016	08066	81116	54166	27216	00266	73316	46355	19403	28	4046
116	63427	36477	09527	82577	55627	28677	01727	74777	47816	20864	7	4056
120	64888	37938	10988	84038	57088	30138	03188	76238	49277	22325	17	4066
124	66349	39399	12449	85499	58549	31599	04649	77699	50738	23786	27	4076
128	67810	40860	13910	86960	60010	33060	06110	79160	52199	25247	7	4086
132	69271	42321	15371	88421	61471	34521	07571	80621	53660	26708	17	4096
136	70732	43782	16832	89882	62932	35982	09032	82082	55121	28169	27	4106
140	72193	45243	18293	91343	64393	37443	10493	83543	56582	29630	6	4116
144	73654	46704	19754	92804	65854	38904	11954	85004	58043	31091	16	4126
148	75115	48165	21215	94265	67315	40365	13415	86465	59504	32552	26	4136
152	76576	49626	22676	95726	68776	41826	14876	87926	60965	34013	6	4146
156	78037	51087	24137	97187	70237	43287	16337	89387	62426	35474	16	4156
160	79498	52548	25598	98648	71698	44748	17798	90848	63887	36935	26	4166
164	80959	54009	27059	00109	73159	46209	19259	92309	65348	38396	36	4176
168	82420	55470	28520	01570	74620	47670	20720	93770	66809	39857		4186
172	83881	56931	29981	03031	76081	49131	22181	95231	68270	41318		4196
176	85342	58392	31442	04492	77542	50592	23642	96692	69731	42779		4206
180	86803	59853	32903	05953	79003	52053	25103	98153	71192	44240		4216
184	88264	61314	34364	07414	80464	53514	26564	99604	72653	45701		4226
188	89725	62775	35825	08875	81925	54975	28025	01065	74114	47162		4236
192	91186	64236	37286	10336	83386	56436	29486	02526	75575	48623		4246
196	92647	65697	38747	11797	84847	57897	30947	03987	77036	50084		4256
	I7	I8	I9	20	20	21	22	23	23	24		

* denotes a common year.

FOR COMPUTING THE GEOCENTRIC CO-ORDINATES OF A PLACE.

ϕ	log. X.	log. Y.	ϕ	log. X.	log. Y.
$^{\circ}$		diff.	$^{\circ}$		diff.
\pm 0	9.9970705	4	\pm 40	9.9976745	252
1	.9970709	14	41	.9976997	254
2	.9970723	22	42	.9977251	255
3	.9970745	31	43	.9977506	255
4	.9970776	40	44	.9977761	255
5	9.9970816	49	45	9.9978016	256
6	.9970865	57	46	.9978272	255
7	.9970922	66	47	.9978527	255
8	.9970988	74	48	.9978782	254
9	.9971062	83	49	.9979036	252
10	9.9971145	92	50	9.9979288	252
11	.9971237	99	51	.9979540	249
12	.9971336	108	52	.9979789	247
13	.9971444	116	53	.9980036	245
14	.9971560	123	54	.9980281	242
15	9.9971683	131	55	9.9980523	239
16	.9971814	139	56	.9980762	235
17	.9971953	146	57	.9980997	232
18	.9972099	154	58	.9981229	228
19	.9972253	160	59	.9981457	224
20	9.9972413	168	60	9.9981681	220
21	.9972581	174	61	.9981901	215
22	.9972755	180	62	.9982116	209
23	.9972935	187	63	.9982325	205
24	.9973122	192	64	.9982530	199
25	9.9973314	198	65	9.9982729	193
26	.9973512	204	66	.9982922	188
27	.9973716	209	67	.9983110	181
28	.9973925	214	68	.9983291	175
29	.9974139	219	69	.9983466	168
30	9.9974358	223	70	9.9983634	161
31	.9974581	227	71	.9983795	154
32	.9974808	232	72	.9983949	147
33	.9975040	235	73	.9984096	140
34	.9975275	238	74	.9984236	132
35	9.9975513	241	75	9.9984368	124
36	.9975754	245	76	.9984492	117
37	.9975999	246	77	.9984609	108
38	.9976245	249	78	.9984717	100
39	.9976494	251	79	.9984817	92
\pm 40	9.9976745	0.0006040	\pm 80	9.9984909	0.0014204

Let ϕ' and ρ be the geocentric latitude and radius of the place, ϕ being the geographical latitude, then :—

$$\begin{aligned}\rho \sin \phi' &= X \sin \phi, \\ \rho \cos \phi' &= Y \cos \phi.\end{aligned}$$

* * The Longitudes are reckoned from the Meridian of Greenwich.

No.	Place and Altitude.	Longitude.	Latitude.	Reduction to Geocentric Latitude.
		h m s		
1	ADELAIDE, 141 ft. - - - - -	9 14 20.30 E.	34 55 38.5 S.	+ 10 52.4
2	ALBANY, U.S.A., 220 ft. - - - - -	4 55 6.8 W.	42 39 12.7 N.	- 11 33.1
3	ALGIERS, 1123 ft. - - - - -	0 12 8.38 E.	36 47 50 N.	- 11 6.7
4	ALLEGHENY, 1145 ft. - - - - -	5 20 2.93 W.	40 27 41.6 N.	- 11 26.6
5	AMHERST, U.S.A., (New Obs.), 363 ft. -	4 50 5.93 W.	42 21 56.5 N.	- 11 32.5
6	ANN-ARBOR, Mich., 926 ft. - - - - -	5 34 55.27 W.	42 16 48.7 N.	- 11 32.3
7	AREQUIPA, 8041 ft. - - - - -	4 46 11.73 W.	16 22 28.0 S.	+ 6 15.2
8	ARMAGH, 200 ft. - - - - -	0 26 35.4 W.	54 21 12.7 N.	- 10 59.6
9	ATHENS, 351 ft. - - - - -	1 34 52.92 E.	37 58 19.7 N.	- 11 14.3
10	BAMBERG, 984 ft. - - - - -	0 43 33.57 E.	49 53 6.0 N.	- 11 26.0
11	BERLIN, 154 ft. - - - - -	0 53 34.80 E.	52 30 16.7 N.	- 11 12.5
12	BESANÇON, 1024 ft. - - - - -	0 23 57.1 E.	47 14 59.0 N.	- 11 33.7
13	BIRR CASTLE (Earl of Rosse), 184 ft. -	0 31 40.9 W.	53 5 47 N.	- 11 8.7
14	BOLOGNA, 275 ft. - - - - -	0 45 24.48 E.	44 29 54 N.	- 11 35.5
15	BOMBAY (Colaba), 63 ft. - - - - -	4 51 15.15 E.	18 53 36.2 N.	- 7 5.1
16	BONN, 203 ft. - - - - -	0 28 23.17 E.	50 43 45.0 N.	- 11 22.3
17	BORDEAUX, 240 ft. - - - - -	0 2 5.51 W.	44 50 7.3 N.	- 11 35.6
18	BRESLAU, 482 ft. - - - - -	1 8 8.72 E.	51 6 55.8 N.	- 11 20.4
19	BRISBANE - - - - -	10 12 6.40 E.	27 28 0.0 S.	+ 9 28.3
20	BRUSSELS (UCCLE), 328 ft. - - - - -	0 17 26.05 E.	50 47 55.5 N.	- 11 21.9
21	BUDA PESTH - - - - -	1 16 13.7 E.	47 28 49 N.	- 11 33.3
22	CAMBRIDGE, 92 ft. - - - - -	0 0 22.75 E.	52 12 51.6 N.	- 11 14.3
23	CAMBRIDGE, U.S.A., Harvard Coll. Obs.,	4 44 31.05 W.	42 22 47.6 N.	- 11 32.5
24	CAPE OF GOOD HOPE, 42 ft. - - [79 ft.	1 13 54.76 E.	33 56 3.5 S.	+ 10 43.6
25	CATANIA, 154 ft. - - - - -	1 0 20.6 E.	37 30 13.3 N.	- 11 11.4
26	CHARKOW, 451 ft. - - - - -	2 24 55.77 E.	50 0 9.6 N.	- 11 25.5
27	CHARLOTTESVILLE, Va., Leander McCor-	5 14 5.22 W.	38 2 1.2 N.	- 11 14.7
28	CHRISTIANIA, 82 ft. - [mick Obs., 820 ft.	0 42 53.50 E.	59 54 44.0 N.	- 10 4.5
29	CINCINNATI, 863 ft. - - - - -	5 37 41.29 W.	39 8 19.5 N.	- 11 20.7
30	CLEVELAND, OHIO, Case Obs., 696 ft. -	5 26 25.82 W.	41 30 14.5 N.	- 11 30.2
31	CLINTON, U.S.A., Hamilton Coll., 906 ft.	5 1 37.45 W.	43 3 17.0 N.	- 11 33.9
32	COIMBRA, 325 ft. - - - - -	0 33 43.1 W.	40 12 24.5 N.	- 11 25.6
33	COPENHAGEN, 46 ft. - - - - -	0 50 18.69 E.	55 41 12.6 N.	- 10 48.6
34	CORDOBA, 1440 ft. - - - - -	4 16 48.22 W.	31 25 15.5 S.	+ 10 18.0
35	CRACOW, 725 ft. - - - - -	1 19 50.27 E.	50 3 51.9 N.	- 11 25.2
36	DEHRA DÛN, 2236 ft. - - - - -	5 12 13.47 E.	30 18 51.8 N.	- 10 5.2
37	DORPAT, 215 ft. - - - - -	1 46 53.22 E.	58 22 46.8 N.	- 10 22.1
38	DUBLIN (DUNSHANK), 283 ft. - - - - -	0 25 21.1 W.	53 23 13.1 N.	- 11 6.7
39	DURHAM, 351 ft. - - - - -	0 6 19.75 W.	54 46 6.2 N.	- 10 56.4
40	DUSSELDORF, 85 ft. - - - - -	0 27 5.0 E.	51 12 25.0 N.	- 11 19.9

OBSERVATORIES.

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* * The Longitudes are reckoned from the Meridian of Greenwich.

No.	Log. p.	Authority for Longitude.	Authority for Latitude.
1	9.999524	Tel. Determination by Ellery, Russell and Todd.	Adelaide Astronomical Obs.
2	9.999331	<i>Astronomical Journal</i> , No. 334	<i>Astronomical Journal</i> , No. 334.
3	9.999478	Albrecht's <i>Compensation</i> .	Triangulation by Trépied.
4	9.999387	U.S. Coast and Geodetic Survey.	Zenith Telescope Observations.
5	9.999339	Communicated by Prof. Todd.	Communicated by Prof. Todd.
6	9.999341	Publications of Obs., Vol. I., 1915.	Publications of Obs., Vol. I., 1915.
7	9.999885	<i>Harvard Annals</i> , 1903.	<i>Harvard Annals</i> , 1903.
8	9.999036	Armagh Catalogue of Stars, 1840.	Armagh Catalogue of Stars, 1840.
9	9.999449	Determination by Hartl.	<i>Annals</i> , Vol. VI., 1912.
10	9.999147	Albrecht's <i>Compensation</i> .	Communicated by Dr. Hartwig.
11	9.999082	Albrecht's <i>Compensation</i> .	<i>Beobachtungs- Ergebnisse</i> , Heft 3.
12	9.999214	Telegraphic connection with Paris.	Meridian Observations.
13	9.999067	Ordnance Survey.	Ordnance Survey.
14	9.999284	Albrecht's <i>Compensation</i> .	Determination by Respighi.
15	9.999848	Great Trigonometrical Survey of India.	Great Trigonometrical Survey of India.
16	9.999127	Albrecht's <i>Compensation</i> .	Communicated by Prof. Küstner.
17	9.999275	Telegraphic connection with Paris.	Zenith Distances of Fundamental Stars
18	9.999116	Albrecht's <i>Compensation</i> .	Geodätisches Institut of Berlin.
19	9.999690	Telegraphic connection with Sydney.	Zenith Telescope Observations.
20	9.999124	<i>Annuaire Astronomique</i> , 1919.	<i>Annuaire Astronomique</i> , 1919.
21	9.999208	Berliner Jahrbuch.	Berliner Jahrbuch.
22	9.999089	Cambridge Observations.	Cambridge Observations.
23	9.999338	U.S. Coast and Geodetic Survey.	<i>Annals of the Observatory</i> , Vol. XVII.
24	9.999547	<i>Annals of Cape Observatory</i> , Vol. I., part 2.	Cape General Catalogue of Stars, 1885.
25	9.999461	Determination by Zona and Ricco.	Determination by Zona.
26	9.999144	Communicated by Prof. Lewitzky.	Communicated by Prof. Lewitzky.
27	9.999448	<i>Publications of Observatory</i> , Vol. I., part 1.	<i>Publications of Observatory</i> , Vol. I., part 1.
28	9.998906	Albrecht's <i>Compensation</i> .	<i>Astron. Nachrichten</i> , No. 3193.
29	9.999420	U.S. Coast and Geodetic Survey.	U.S. Coast and Geodetic Survey.
30	9.999361	Communicated by Prof. Howe.	Communicated by Prof. Howe.
31	9.999321	The American Ephemeris.	The American Ephemeris.
32	9.999394	Ephemerides Astron. de Coimbra, 1889.	Ephemerides Astron. de Coimbra, 1889.
33	9.999004	Albrecht's <i>Compensation</i> .	Communicated by Prof. Strömgren.
34	9.999605	Observatory and U.S. Naval Expeditions.	Meridian Observations of Circumpolar Stars.
35	9.999143	Albrecht's <i>Compensation</i> .	Austrian Gradmessungen-Commission.
36	9.999629	Great Trigonometrical Survey of India.	Great Trigonometrical Survey of India.
37	9.998941	Albrecht's <i>Compensation</i> .	Determination by Schwarz.
38	9.999060	<i>Transactions Royal Irish Academy</i> , 1838.	<i>Transactions Royal Dublin Society</i> , Vol. IV.
39	9.999026	Transport of Chronometers.	Meridian Observations of Circumpolar Stars.
40	9.999114	<i>Astron. Nachrichten</i> , No. 643.	<i>Astron. Nachrichten</i> , No. 643.

* * * The Longitudes are reckoned from the Meridian of Greenwich.

No.	Place and Altitude.	Longitude.	Latitude.	Reduction to Geocentric Latitude.
		h m s		
41	EDINBURGH (Blackford Hill), 441 ft. - -	0 12 44.2 W.	55 55 30.0 N.	- 10 46.5
42	EVANSTON, Ill., Dearborn Obs., 574 ft. -	5 50 42.3 W.	42 3 33.4 N.	- 11 31.8
43	FLAGSTAFF, ARIZONA, (Mr. Lowell),	7 26 44.58 W.	35 12 30.5 N.	- 10 54.7
44	FLORENCE, Arcetri, 604 ft. - - [7250 ft.	0 45 1.30 E.	43 45 14.6 N.	- 11 34.9
45	GENEVA, 1335 ft. - - - - -	0 24 36.61 E.	46 11 59.3 N.	- 11 35.2
46	GEORGETOWN COLL., D.C., U.S.A., 151 ft.	5 8 18.24 W.	38 54 26.0 N.	- 11 19.5
47	GLASGOW, 180 ft. - - - - -	0 17 10.55 W.	55 52 42.1 N.	- 10 46.9
48	GLASGOW, U.S.A., Morrison Obs., 748 ft. -	6 11 18.08 W.	39 13 45.6 N.	- 11 21.1
49	GOTHA, 1083 ft. - - - - -	0 42 50.44 E.	50 56 37.9 N.	- 11 21.1
50	GÖTTINGEN, 532 ft. - - - - -	0 39 46.22 E.	51 31 48.2 N.	- 11 18.2
51	GREENWICH, 154 ft. - - - - -	0 0 0	51 28 38.2 N.	- 11 18.5
52	HAMBURG (Bergedorf), 131 ft. - - - -	0 40 57.74 E.	53 28 46.7 N.	- 11 6.1
53	HAVERFORD COLLEGE, Pa. - - - - -	5 1 12.70 W.	40 0 40.1 N.	- 11 24.7
54	HEIDELBERG, 1870 ft. - - - - -	0 34 53.13 E.	49 23 54.9 N.	- 11 27.8
55	HELSINGFORS, 125 ft. - - - - -	1 39 49.10 E.	60 9 42.3 N.	- 10 1.5
56	HELWAN, 390 ft. - - - - -	2 5 22 E.	29 51 33 N.	- 9 59.7
57	HERÉNY (Herr von Gothard), 751 ft. - -	1 6 24.7 E.	47 15 47.4 N.	- 11 33.7
58	HONG KONG, 112 ft. - - - - -	7 36 41.86 E.	22 18 13.2 N.	- 8 7.4
59	HYDERABAD, Nizamiah Obs., 1818 ft. -	5 13 48.98 E.	17 25 54.3 N.	- 6 36.6
60	JAMAICA, MONTEGO BAY (Mr. Hall) - -	5 11 29.48 W.	18 24 51 N.	- 6 55.9
61	JENA, 512 ft. - - - - -	0 46 21.25 E.	50 55 34.9 N.	- 11 21.3
62	JOHANNESBURG, Union Obs., 5924 ft. - -	1 52 18.0 E.	26 10 55.2 S.	+ 9 9.8
63	KASAN, Engelhardt Observatory, 322 ft.	3 15 16.5 E.	55 50 20.0 N.	- 10 47.3
64	KASAN, University Observatory, 259 ft. -	3 16 29.01 E.	55 47 24.3 N.	- 10 47.7
65	KEW, 33 ft. - - - - -	0 1 15.1 W.	51 28 6 N.	- 11 18.5
66	KIEL, 154 ft. - - - - -	0 40 35.57 E.	54 20 28.5 N.	- 10 59.7
67	KIEW, 587 ft. - - - - -	2 2 0.56 E.	50 27 11.8 N.	- 11 23.5
68	KODAIKANAL, 7688 ft. - - - - -	5 9 52.0 E.	10 13 50 N.	- 4 2.3
69	KÖNIGSBERG, 72 ft. - - - - -	1 21 58.97 E.	54 42 50.4 N.	- 10 56.8
70	KREMSMÜNSTER, 1260 ft. - - - - -	0 56 31.58 E.	48 3 23.1 N.	- 11 31.9
71	LA PLATA, 52 ft. - - - - -	3 51 44.8 W.	34 54 30.5 S.	+ 10 52.2
72	LEIPZIG, 390 ft. - - - - -	0 49 33.93 E.	51 20 5.9 N.	- 11 19.2
73	LEYDEN, 20 ft. - - - - -	0 17 56.15 E.	52 9 20.0 N.	- 11 14.6
74	LISBON, Tapada, 308 ft. - - - - -	0 36 44.68 W.	38 42 30.5 N.	- 11 18.5
75	LIVERPOOL (BIDSTON, BIRKENHEAD), 200 ft.	0 12 17.33 W.	53 24 4.8 N.	- 11 6.6
76	LORENZO MARQUES, Campos Roderigues	2 10 22.63 E.	25 58 5.5 S.	+ 9 6.6
77	LUND, 112 ft. - - - - - [Obs., 195 ft.	0 52 44.97 E.	55 41 51.6 N.	- 10 48.5
78	LYONS, 981 ft. - - - - -	0 19 8.52 E.	45 41 40.9 N.	- 11 35.5
79	MADISON, Wis., Washburn Obs., 961 ft. -	5 57 37.90 W.	43 4 36.7 N.	- 11 33.9
80	MADRAS 23 ft. - - - - -	5 20 59.62 E.	13 4 8.0 N.	- 5 5.5

* * * The Longitudes are reckoned from the Meridian of Greenwich.

No.	Log. p.	Authority for Longitude.	Authority for Latitude.
41	9.998999	Communicated by Prof. Copeland.	<i>M.N.R.A.S.</i> , January 1907.
42	9.999347	Standard Time comparison by Telegraph.	Meridian Observations.
43	9.999517	Communicated by Mr. P. Lowell.	Communicated by Mr. P. Lowell.
44	9.999303	Albrecht's <i>Compensation</i> .	Commissione Italiana, Milan, 1886.
45	9.999241	Albrecht's <i>Compensation</i> .	Determination by Pidoux.
46	9.999426	<i>Annals of Observatory</i> , No. 1.	<i>The Photochronograph and its applications</i> , 1894.
47	9.998999	<i>M.N.R.A.S.</i> , December 1865.	<i>M.N.R.A.S.</i> , October 1917.
48	9.999418	The American Ephemeris.	The American Ephemeris.
49	9.999121	Albrecht's <i>Compensation</i> .	Communicated by Prof. Harzer.
50	9.999106	Albrecht's <i>Compensation</i> .	Communicated by Prof. Schur.
51	9.999107		Greenwich Observations.
52	9.999057	Albrecht's <i>Compensation</i> .	Observations by Talcott's Method, 1909.
53	9.999398	Communicated by Prof. Collins.	Determination by Sharpless.
54	9.999159	Determination by Becker and Valentiner.	Determination by Becker and Valentiner.
55	9.998901	Albrecht's <i>Compensation</i> .	Determination by Donner.
56	9.999640	Communicated by Mr. Keeling.	Communicated by Mr. Keeling.
57	9.999214	Determination by Von Konkoly and Tetens.	Determination by Von Sterneck.
58	9.999791	Determination by Green, U.S.N.	Determination by Doberek.
59	9.999870	Communicated by Director, 1916.	Communicated by Director, 1916.
60	9.999855	Report on Transit of Venus, 1882.	Report on Transit of Venus, 1882.
61	9.999122	Preussische Landesaufnahme, 1900.	Meridian Observations.
62	9.999717	Observatory Circular, 1916.	Observatory Circular, 1916.
63	9.999001	Communicated by Prof. Dubiago.	Communicated by Prof. Dubiago.
64	9.999001	Bakhuyzen's <i>Compensation</i> .	Observations by Talcott's Method.
65	9.999107	Determination by Balfour Stewart.	Determination by Balfour Stewart.
66	9.999037	Albrecht's <i>Compensation</i> .	Geodätisches Institut of Berlin.
67	9.999133	Albrecht's <i>Compensation</i> .	<i>Annales de l'Observatoire</i> , Tome III.
68	9.999954	Communicated by Director, 1912.	Communicated by Director, 1912.
69	9.999028	Albrecht's <i>Compensation</i> .	<i>Astron. Beobachtungen</i> , Band 38.
70	9.999194	Albrecht's <i>Compensation</i> .	Determination by Tinter.
71	9.999524	Publications of Obs., Vol. V., 1919.	Publications of Obs., Vol. V., 1919.
72	9.999111	Albrecht's <i>Compensation</i> .	Observations with Universal Instrument.
73	9.999090	Albrecht's <i>Compensation</i> .	<i>Annalen der Sternwarte</i> , Band II.
74	9.999431	Determination by Green, U.S.N.	Communicated by Director, July 1911.
75	9.999059	<i>M.N.R.A.S.</i> , November 1894.	<i>M.N.R.A.S.</i> , November 1894.
76	9.999721	Publications of Obs., Vol. II., 1911.	Publications of Obs., Vol. IV., 1912.
77	9.999004	Albrecht's <i>Compensation</i> .	Determination by Engstrom.
78	9.999254	Bakhuyzen's <i>Compensation</i> .	<i>Bulletin Astronomique</i> , Tome XI.
79	9.999320	Communicated by Prof. Comstock.	<i>Publications of Observatory</i> , Vol. VI.
80	9.999926	Great Trigonometrical Survey of India.	Great Trigonometrical Survey of India.

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No.	Place and Altitude.	Longitude.	Latitude.	Reduction to Geocentric Latitude.
		h m s		
81	MADRID, 2149 ft. - - - - -	0 14 45.09 W.	40° 24' 30.0" N.	- 11 26.4
82	MARSEILLES, 246 ft. - - - - -	0 21 34.55 E.	43 18 17.5 N.	- 11 34.3
83	MAURITIUS, Royal Alfred Obs., 177 ft. -	3 50 12.6 E.	20 5 39 S.	+ 7 27.8
84	MELBOURNE, 92 ft. - - - - -	9 39 54.15 E.	37 49 53.2 S.	+ 11 13.4
85	MILAN, Brera, 394 ft. - - - - -	0 36 45.88 E.	45 27 59.2 N.	- 11 35.6
	[79 ft.]			
86	MONTEVIDEO, Obs. Inst. Meteorológico,	3 44 51.4 W.	34 54 33 S.	+ 10 52.2
87	MONTREAL, McGill College, 187 ft. -	4 54 18.88 W.	45 30 19.1 N.	- 11 35.6
88	MOSCOW, 466 ft. - - - - -	2 30 17.03 E.	55 45 19.5 N.	- 10 48.0
89	MOUNT HAMILTON, Lick Obs., 4209 ft. -	8 6 34.89 W.	37 20 25.6 N.	- 11 10.4
90	MOUNT WILSON OBS., 5900 ft. - - -	7 52 14 33 W.	34 12 59.5 N.	- 10 46.2
91	MUNICH, Bogenhausen, 1736 ft. - - -	0 46 26.02 E.	48 8 45.5 N.	- 11 31.7
92	NAPLES, Capo di Monte, 538 ft. - - -	0 57 1.70 E.	40 51 46.3 N.	- 11 28.1
93	NEUCHÂTEL, 1601 ft. - - - - -	0 27 49.90 E.	46 59 50.6 N.	- 11 34.1
94	NEW HAVEN, Yale University, 131 ft. -	4 51 40.58 W.	41 19 22.3 N.	- 11 29.7
95	NEW YORK, Columbia University - - -	4 55 53.64 W.	40 45 23.1 N.	- 11 27.7
96	NICE, 1240 ft. - - - - -	0 29 12.15 E.	43 43 16.9 N.	- 11 34.9
97	NICOLAIEFF, 180 ft. - - - - -	2 7 53.78 E.	46 58 22.1 N.	- 11 34.2
98	NORTHFIELD, Carleton College, 938 ft. -	6 12 35.81 W.	44 27 41.6 N.	- 11 35.5
99	ODESSA, 180 ft. - - - - -	2 3 2.04 E.	46 28 36.7 N.	- 11 34.9
100	O'GYALLA (Dr. Von Konkoly), 371 ft. -	1 12 45.60 E.	47 52 27.3 N.	- 11 32.4
101	OTTAWA, 276 ft. - - - - -	5 2 51.98 W.	45 23 39.1 N.	- 11 35.6
102	OXFORD, Radcliffe Observatory, 213 ft. -	0 5 2.6 W.	51 45 35.6 N.	- 11 16.9
103	OXFORD, University Observatory, 210 ft. -	0 5 0.4 W.	51 45 34.2 N.	- 11 16.9
104	PADUA, 102 ft. - - - - -	0 47 29.15 E.	45 24 1.0 N.	- 11 35.6
105	PAISLEY, Coats Observatory, 107 ft. - -	0 17 43.3 W.	55 50 43.8 N.	- 10 47.2
106	PALERMO, 249 ft. - - - - -	0 53 25.87 E.	38 6 44.5 N.	- 11 15.1
107	PARIS, 194 ft. - - - - -	0 9 20.93 E.	48 50 11.2 N.	- 11 29.7
108	PEKIN, Central Observatory - - - - -	7 45 52.87 E.	39 54 23.0 N.	- 11 24.3
109	PERTH, Western Australia, 197 ft. - - -	7 43 21.74 E.	31 57 7.4 S.	+ 10 23.8
110	PETROGRAD, Academy of Sciences, 10 ft. -	2 1 13.40 E.	59 56 29.7 N.	- 10 4.2
111	POLA, 105 ft. - - - - -	0 55 23.07 E.	44 51 48.7 N.	- 11 35.7
112	POTSDAM, 318 ft. - - - - -	0 52 15.86 E.	52 22 56.0 N.	- 11 13.3
113	PRAGUE, 646 ft. - - - - -	0 57 40.28 E.	50 5 15.8 N.	- 11 25.1
114	PRINCETON, New Jersey, 213 ft. - - -	4 58 37.61 W.	40 20 57.8 N.	- 11 26.2
115	PULKOWA, 246 ft. - - - - -	2 1 18.57 E.	59 46 18.7 N.	- 10 6.2
116	QUEBEC (Time Ball on Cavalier Building)	4 44 49.38 W.	46 48 31.2 N.	- 11 34.4
117	RIO DE JANEIRO, 207 ft. - - - - -	2 52 41.4 W.	22 54 23.7 S.	+ 8 17.7
118	ROME, Capitol, 207 ft. - - - - -	0 49 56.34 E.	41 53 33.6 N.	- 11 31.3
119	ROME, Roman College, 194 ft. - - - -	0 49 55.36 E.	41 53 53.6 N.	- 11 31.3
120	ROME, Vatican - - - - -	0 49 49.28 E.	41 54 4.8 N.	- 11 31.3

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No.	Log. ρ .	Authority for Longitude.	Authority for Latitude.
81	9.999389	<i>Anuario</i> , 1916.	<i>Anuario</i> , 1916.
82	9.999315	Albrecht's <i>Compensation</i> .	Meridian Observations.
83	9.999829	Communicated by Mr. Meldrum.	Communicated by Mr. Meldrum.
84	9.999452	<i>Astronomical Results</i> , Vol. VII.	<i>Astronomical Results</i> , Vol. VII.
85	9.999260	Albrecht's <i>Compensation</i> .	<i>Publications</i> , No. 51, 1914.
86	9.999524	Communicated by Director, 1919.	Communicated by Director, 1919.
87	9.999259	U.S. Coast and Geodetic Survey.	U.S. Coast and Geodetic Survey.
88	9.999003	Albrecht's <i>Compensation</i> .	Determination by Sternberg.
89	9.999465	U.S. Coast and Geodetic Survey.	Determination by Tucker.
90	9.999540	<i>Contributions from Solar Observatory</i> , No. 9.	<i>Contributions from Solar Observatory</i> , No. 9.
91	9.999192	Albrecht's <i>Compensation</i> .	Communicated by Prof. Seeliger.
92	9.999377	Bakhuyzen's <i>Compensation</i> .	Determination by Fergola.
93	9.999220	Bakhuyzen's <i>Compensation</i> .	Berliner Jahrbuch.
94	9.999366	The American Ephemeris.	The American Ephemeris.
95	9.999380	Triangulation from Rutherford's Observatory.	Triangulation from Rutherford's Observatory.
96	9.999304	Albrecht's <i>Compensation</i> .	<i>Annales de l'Observatoire</i> , Tome II.
97	9.999221	Bakhuyzen's <i>Compensation</i> .	Communicated by Prof. Kortazzi.
98	9.999285	Telegraphic connection with Washington.	<i>Publications of Observatory</i> , No. 1.
99	9.999234	Albrecht's <i>Compensation</i> .	Observations in the Prime Vertical.
100	9.999197	Determination by Von Konkoly.	Determination by Lakits.
101	9.999261	Communicated by Director, 1919.	Communicated by Director, 1919.
102	9.999100	Radcliffe Observations, 1842.	Radcliffe Catalogue of Stars, 1900.
103	9.999100	Ordnance Survey.	Ordnance Survey.
104	9.999261	Albrecht's <i>Compensation</i> .	Determination by Ciscato.
105	9.998999	Communicated by Observatory Committee.	Communicated by Observatory Committee.
106	9.999446	Bakhuyzen's <i>Compensation</i> .	Determination by Zona.
107	9.999174	Albrecht's <i>Compensation</i> .	Determination by Laugier.
108	9.999401	Communicated by Director, 1920.	Communicated by Director, 1920.
109	9.999593	Government Lands and Survey Office, Perth.	Communicated by Mr. W. E. Cooke.
110	9.998906	Triangulation from Pulkowa.	Triangulation from Pulkowa.
111	9.999275	Austrian Gradmessungen-Commission.	Austrian Gradmessungen-Commission.
112	9.999084	Albrecht's <i>Compensation</i> .	<i>Publications of Observatory</i> , Vol. VI.
113	9.999142	Albrecht's <i>Compensation</i> .	<i>Astron. Beobachtungen</i> , 1888-1891.
114	9.999390	The American Ephemeris.	The American Ephemeris.
115	9.998909	Albrecht's <i>Compensation</i> .	<i>Description de l'Observatoire</i> .
116	9.999225	Communicated by Hydrographer, Ottawa, 1919.	Communicated by Hydrographer, Ottawa, 1919.
117	9.999780	Determination by Green, U.S.N.	Determination by Green, U.S.N.
118	9.999350	Albrecht's <i>Compensation</i> .	Determination by Respighi.
119	9.999350	Albrecht's <i>Compensation</i> .	Determination by Millosevich.
120	9.999350	Albrecht's <i>Compensation</i> .	Communicated by Sig. Denza.

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No.	Place and Altitude.	Longitude.	Latitude.	Reduction to Geocentric Latitude.
		h m s		
121	ROUSDON, Devon, 516 ft. - - - - -	0 11 58.94 W.	50° 42' 38" N.	-11 22.3
122	RUGBY, Temple Obs., 384 ft. - - - - -	0 5 2.0 W.	52 22 7 N.	-11 13.4
123	SAN FERNANDO, near CADIZ, 101 ft. - - - - -	0 24 49.30 W.	36 27 42.0 N.	-11 4.3
124	SANTIAGO DE CHILE, 1704 ft. - - - - -	4 42 46.3 W.	33 26 42.0 S.	+10 39.0
125	SOUTH KENSINGTON, London, S.W. - - - - -	0 0 41.54 W.	51 29 48.0 N.	-11 18.4
126	STOCKHOLM, 144 ft. - - - - -	1 12 13.97 E.	59 20 32.7 N.	-10 11.3
127	STONYHURST, 381 ft. - - - - -	0 9 52.68 W.	53 50 40 N.	-11 3.5
128	STRASBURG, 472 ft. - - - - -	0 31 4.52 E.	48 35 0.3 N.	-11 30.5
129	SUTTON, SURREY (Mr. Doberck), 167 ft. - - - - -	0 0 44.53 W.	51 22 19.8 N.	-11 19.0
130	SYDNEY, 144 ft. - - - - -	10 4 49.54 E.	33 51 41.1 S.	+10 42.9
131	TACUBAYA, MEXICO, 7619 ft. - - - - -	6 36 46.67 W.	19 24 17.9 N.	- 7 14.9
132	TASCHKENT, 1499 ft. - - - - -	4 37 10.82 E.	41 19 31.4 N.	-11 29.7
133	TOKYO - - - - -	9 18 58.02 E.	35 39 17.5 N.	-10 58.3
134	TORONTO, 350 ft. - - - - -	5 17 34.65 W.	43 39 35.9 N.	-11 34.8
135	TOULOUSE, 636 ft. - - - - -	0 5 51.23 E.	43 36 44.0 N.	-11 34.7
136	TRIESTE, 220 ft. - - - - - [197 ft.	0 55 5.4 E.	45 38 35.5 N.	-11 35.5
137	TRIVANDRUM, Maharaja's Observatory,	5 7 59 E.	8 30 32 N.	- 3 22.9
138	TULSE HILL, London (Sir W. Huggins),	0 0 27.7 W.	51 26 47 N.	-11 18.6
139	TURIN, Pino Torinese, 2028 ft. - [174 ft.	0 31 5.95 E.	45 2 16.3 N.	-11 35.7
140	UPSALA, 69 ft. - - - - -	1 10 30.12 E.	59 51 29.4 N.	-10 5.2
141	URBANA, University of Illinois, 774 ft. -	5 52 53.93 W.	40 6 20.2 N.	-11 25.2
142	UTRECHT, 39 ft. - - - - - [730 ft.	0 20 30.97 E.	52 5 9.5 N.	-11 15.1
143	VICTORIA, B.C., Astrophysical Obs.,	8 13 40.17 W.	48 31 15.7 N.	-11 30.7
144	VENICE, Istituto di Marina, 49 ft. - - -	0 49 22.12 E.	45 26 10.5 N.	-11 35.6
145	VIENNA, Imperial Observatory, 787 ft. -	1 5 21.35 E.	48 13 55.4 N.	-11 31.5
146	VIENNA, Ottakring (Herr Kuffner),	1 5 10.96 E.	48 12 46.7 N.	-11 31.6
147	WARSAW, 361 ft. - - - - - [935 ft.	1 24 7.25 E.	52 13 4.6 N.	-11 14.3
148	WASHINGTON, Georgetown Heights, 269 ft.	5 8 15.78 W.	38 55 14.0 N.	-11 19.6
149	WELLINGTON, N.Z., Hector Obs., 416 ft.	11 39 4.27 E.	41 17 3.8 S.	+11 29.5
150	WILHELMSHAVEN, 30 ft. - - - - -	0 32 35.06 E.	53 31 52.2 N.	-11 4.7
	[1099 ft.			
151	WILLIAMS BAY, Wis., Yerkes Obs.,	5 54 13.24 W.	42 34 12.6 N.	-11 33.0
152	WINDSOR, N.S.W. (Mr. Tebbutt), 52 ft.	10 3 20.51 E.	33 36 30.8 S.	+10 40.6
153	ZURICH, 1536 ft. - - - - -	0 34 12.26 E.	47 22 38.3 N.	-11 33.5

NOTES.—

Albrecht's *Compensation*. The reference is to Prof. Albrecht's paper in *Astron. Nachrichten*, No. 3993.

Bakhuyzen's *Compensation*. The reference is to Prof. Bakhuyzen's paper in *Astron. Nachrichten*, No. 3202, the adopted difference of longitude Paris—Greenwich being 9^m 20^s.93.

* * The Longitudes are reckoned from the Meridian of Greenwich.

No.	Log. ρ .	Authority for Longitude.	Authority for Latitude.
121	9.999127	Ordnance Survey.	Ordnance Survey.
122	9.999084	Ordnance Survey.	Ordnance Survey.
123	9.999486	Telegraphic connection with Madrid.	Transit-Circle Observations.
124	9.999558	Anuario del Observatorio, 1919.	Anuario del Observatorio, 1919.
125	9.999107	Communicated by Sir J. Norman Lockyer.	Communicated by Sir J. Norman Lockyer.
126	9.998919	Communicated by Director, 1913.	Communicated by Director, 1917.
127	9.999049	Chronometrical connection with Liverpool.	Meridian Observations.
128	9.999180	Albrecht's <i>Compensation</i> .	Meridian Observations of Circumpolar Stars.
129	9.999110	Ordnance Survey.	Ordnance Survey.
130	9.999549	Tel. Determination by Ellery, Russell and Todd.	Sydney Astronomical Observations.
131	9.999840	Boletin del Observatorio, No. 4, 1914.	Boletin del Observatorio, No. 4, 1914.
132	9.999366	Communicated by Prof. Gedeonof.	Communicated by Prof. Gedeonof.
133	9.999506	University Calendar, 1892.	University Calendar, 1892.
134	9.999306	Determination by Carpmael.	Determination by Blake.
135	9.999307	Communicated by M. Cosserat.	Determination by Petit.
136	9.999255	Communicated by Director, 1919.	Communicated by Director, 1919.
137	9.999968	Communicated by Director, 1915.	Communicated by Director, 1915.
138	9.999108	Ordnance Survey.	Ordnance Survey.
139	9.999270	<i>Anuario Astronomico</i> , 1917.	<i>Anuario Astronomico</i> , 1917.
140	9.998908	Albrecht's <i>Compensation</i> :	<i>Astron. Nachrichten</i> , No. 2565.
141	9.999396	Communicated by Prof. Joel Stebbins.	Communicated by Prof. Joel Stebbins.
142	9.999092	Triangulation from Leyden.	<i>Astron. Nachrichten</i> , No. 2411.
143	9.999182	Communicated by Director, 1920.	Communicated by Director, 1920.
144	9.999260	Determination by Millosevich.	Determination by Millosevich.
145	9.999189	Albrecht's <i>Compensation</i> .	K. K. Gradmessungs-Bureau.
146	9.999190	Albrecht's <i>Compensation</i> .	<i>Publicationen der Sternwarte</i> , I. und II.
147	9.999089	Albrecht's <i>Compensation</i> .	<i>Astron. Nachrichten</i> , No. 4666 (July 1913).
148	9.999426	U.S. Coast and Geodetic Survey.	American Ephemeris, 1922.
149	9.999366	Transactions of New Zealand Institute, 1914.	Transactions of New Zealand Institute, 1914.
150	9.999057	Albrecht's <i>Compensation</i> .	Zenith Distances of Zenithal Stars.
151	9.999333	Observatory Bulletin, No. 18.	Observatory Bulletin, No. 18.
152	9.999555	Report of Windsor Observatory, 1888.	Observations in the Prime Vertical.
153	9.999211	Bakhuyzen's <i>Compensation</i> .	Communicated by Prof. A. Wolfer.

Directors are requested to notify H.M. *Nautical Almanac* Office if they desire any change made in the information given above concerning their Observatories.

STANDARD TIMES.

The following Standard Times, referred to the Meridian of Greenwich, have been adopted for railway and other purposes :—

h	m	
11	30	E. New Zealand.
11	0	E. New Caledonia.
10	0	E. Tasmania, Victoria, New South Wales, Queensland, New Guinea.
9	30	E. South Australia.
9	0	E. Japan, Corea.
8	0	E. Western Australia, Portuguese Timor, British North Borneo, Philippine Islands, Macao, Hong Kong, China (Coast), Formosa.
7	0	E. Straits Settlements, Federated Malay States, French Indo-China,
6	30	E. Burma. [Siam.
5	30	E. India.
5	0	E. Chagos Archipelago, Portuguese India.
4	0	E. Mauritius, Seychelles.
3	0	E. Somaliland, Madagascar.
2	30	E. East African Protectorate.
2	0	E. (East Europe).—Roumania, Bulgaria, Turkey, Greece. Egypt, Portuguese East Africa, South Africa.
1	0	E. (Mid-Europe).—Germany, Luxembourg, Denmark, Sweden, Norway, Switzerland, Italy, Austria-Hungary, Bosnia, Servia, Malta, Portuguese West Africa, South-west Africa, Nigeria.
0	0	(Greenwich).—Great Britain, Ireland, France, Belgium, Spain, Portugal, Gibraltar, Algeria, Farøe Islands, Gold Coast Colony.*
1	0	W. Iceland, Madeira, Portuguese Guinea, Sierra Leone.
2	0	W. Azores and Cape Verde Islands.
3	0	W. Eastern Brazil. [Brazil, Chile.
4	0	W. (Atlantic).—Part of Canada, Leeward Islands, Uruguay, Central
5	0	W. (Eastern).—Parts of Canada and United States, Western Brazil, Peru, Panama, Jamaica, Bahamas.
6	0	W. (Central).—Parts of Canada and United States, Honduras.
7	0	W. (Mountain).—Parts of Canada and United States.
8	0	W. (Pacific).—British Columbia and Part of United States.
9	0	W. Yukon, Alaska.
10	30	W. Sandwich Islands.
11	30	W. Samoa.

* For Jan. 1–Sept. 1 only : 20^m E. for rest of year.

EXPLANATION OF THE ARTICLES

CONTAINED IN

THE NAUTICAL ALMANAC AND ASTRONOMICAL
EPHEMERIS FOR THE YEAR 1924.

THE necessarily concise headings in the body of the Almanac in many cases leave the precise meaning of the quantity tabulated in some uncertainty. Very little further explanation is likely to be required by a reader who consults (*a*) the tables of the Sun, Moon, and Planets, and the Star Catalogues quoted in the Preface ; (*b*) the explanation given in foreign almanacs of the matter supplied by them to this Almanac ; (*c*) a section at the end of the Almanac for 1918, which will be here quoted as "Derivation." This section will be reprinted at intervals with changes incorporated.

Ephemeris of Sun and Moon. (Pages 1 to 145.)

"Derivation," Nos. 1 to 25, may be consulted.

Planetary Ephemerides. (Pages 146 to 189.)

In the "Derivation," Nos. 26 to 31, Mars is taken for purposes of illustration. Further statements are necessary as follows :—

Heliocentric places for the planets from Venus to Neptune are to be found in Appendices to the Almanacs for 1915 to 1917.

In the case of Jupiter and Saturn the times of passage over the meridian and the polar semidiameters have been calculated on the assumption, only approximately true, that the extremities of the axes of rotation are the north and south points of the discs.

The transit ephemerides for Mars, Jupiter, and Saturn extend from transit at 20^h to transit at 4^h ; for Uranus and Neptune from transit at 15^h to transit at 4^h ; for Venus the transit is given for every day, the apparent solar day being intended.

Sun's Co-ordinates. (Pages 190 to 197.)

"Derivation," Nos. 32 and 33, may be consulted.

Precession, Nutation, etc. (Pages 198 to 201.)

"Derivation," Nos. 34 to 39, may be consulted.

Stars. (Pages 202 to 431.)

"Derivation," Nos. 40 to 51, may be consulted, and also the explanations of other Almanacs.

The magnitudes have been determined on the assumption that the average magnitude of α Ursæ Minoris, if observed in the Zenith, would be 2.15, and that the light given by a star of magnitude m is r times that given by one of magnitude $m+1$, where $\log r = 0.4$.

The magnitudes of the two stars α Argûs and Sirius are indicated by negative quantities, showing that they are brighter than a star whose magnitude is 0.0.

The Spectra have been taken from a manuscript list forwarded by Professor Pickering. The system of classification is that of *Revised Harvard Photometry* (*Annals of Harvard College Observatory*, vol. 50), from which the following explanation is taken :—

"The nomenclature adopted is that first used in the *Draper Catalogue, H.A.*, vol. 27, modified and extended to satisfy the facts, as the study of the spectrum of the stars developed. Stars of Types I., II., and III., according to the designations of Secchi, are here denoted by the letters A, K, and M. Two well-marked classes between A and K are called F and G. Stars of the Orion or helium type, which contain well-marked helium lines in addition to the Orion lines, are called B. Nearly all the stars can be arranged in a sequence, according to the classes B, A, F, G, K, and M. Peculiar spectra are indicated by Pec. A more detailed study of the spectra showed that many of them fell between these classes. They are indicated by a number following the first class. Thus, B2A, abridged to B2, denotes a spectrum nearly like that of class B, but estimated to be two-tenths of the way from B to A. K5 denotes a star midway between K and M. Stars of the fourth and fifth type are designated by the letters N and O respectively. Class M has been divided into the sub-classes Ma, Mb, Mc, and Md Class O has been divided into the sub-classes Oa, Ob, Oc, Od, and Oe O really precedes B in the sequence, so that Oe5 denotes Oe5B. This classification is fully described in Volume 28, p. 146 For stars having a slight peculiarity, the Class followed by the letter p is used instead of Pec."

Bo, Ao are, however, now usually employed for B, A.

At the foot of each page of Apparent Places of Stars are inserted the respective mean places, together with the natural secant and tangent of the mean declination of each star. Additional facility is thus afforded for the reduction of observations.

At the foot of the column on pages 277 to 431 are given quantities designated L_α , L_δ , ω_α , ω_δ to facilitate the calculation of the small parts of the star correction arising from the nutations, dL , $d\omega$, tabulated on pages 198 to 201.

The formulæ for these four quantities are

$$L_\alpha = \sin \alpha \sin \omega \tan \delta \div 15$$

$$L_\delta = \sin \omega \cos \alpha$$

$$\omega_\alpha = -\cos \alpha \tan \delta \div 15$$

$$\omega_\delta = \sin \alpha.$$

The formulæ to be used for further correction to the apparent places are

$$\begin{aligned}d\alpha &= dL \times L\alpha + d\omega \times \omega\alpha + f' \\d\delta &= dL \times L\delta + d\omega \times \omega\delta.\end{aligned}$$

The numerical values of f' are given on pages 223 to 230.

Moon-culminating Stars. (Pages 432 to 460.)

"Derivation," No. 52, may be consulted.

The Right Ascension of the Moon's bright limb and Declination of the centre are given.

The Moon's age in days is given in the same column with the magnitudes of the stars.

Eclipses. (Pages 461 to 468.)

The explanations of the American Ephemeris and the *Connaissance des Temps* may be consulted.

The Besselian Solar Eclipse Elements have the following geometrical signification:—

The fundamental plane is the plane passing through the centre of the Earth perpendicular to the axis of the Moon's shadow, *i.e.* to the right line joining the centres of the Sun and Moon. The intersection of the fundamental plane with the Earth's Equator is taken as the axis of x , and the axis of y is perpendicular to it and directed towards the North, the Earth's centre being the origin of co-ordinates; so that x and y are the co-ordinates of the point in which the axis of the shadow intersects the fundamental plane. The angle d is the declination of the point in which the axis of the shadow (in the direction Earth, Moon, Sun) intersects the celestial sphere. The angle μ is the Greenwich hour-angle of this same point.

The quantities l_1, l_2 are the radii of the shadow-cones upon the fundamental plane, l_1 corresponding to the penumbra and l_2 to the umbra or shadow. The latter is regarded as positive for an annular, and negative for a total Eclipse.

The values of the log tangents of the semi-angles of the shadow-cones of the penumbra and shadow respectively are also given.

The remaining quantities $x', y',$ and μ' are, respectively, the changes of $x, y,$ and μ in one minute of mean time.

Transit of Mercury across the Sun's Disc. (Page 469.)

This page contains the times of external and internal contact of Mercury at ingress and egress, referred to the centre of the Earth, with equations for reduction to the surface.

Occultations. (Pages 470 to 519.)

The explanation of the American Ephemeris should be consulted, and also Derivation," No. 53.

Satellites of Jupiter. (Pages 521 to 545.)

The explanation of the *Connaissance des Temps* should be consulted.

In the Tables of Configurations the direction of the motion of the satellites is towards the numerals. White circles at the side of the tables denote transits in progress ; black circles, occultations or eclipses.

Satellites of Mars, Saturn, Uranus, and Neptune. (Pages 520, 546 to 550, and 552 to 554.)

The explanation of the American Ephemeris should be consulted.

Rings of Saturn. (Page 551.)

This page gives the apparent size and orientation of Saturn's Rings and the planetocentric position of the Earth and Sun relatively to the plane of the Rings.

a and b are the axes of the outer ellipse of the outer ring.

P is the angle which the minor axis of the Ring-ellipse makes with the Declination circle passing through the middle point of Saturn ; + East, - West.

B is the angular elevation of the Earth above the plane of the Rings, as seen from Saturn ; + North, - South.

B' is the angular elevation of the Sun above the plane of the Rings, as seen from Saturn ; + North, - South.

U is the Geocentric Longitude of Saturn reckoned on the plane of the Rings from the Ascending Node of the Ring on the Equator.

U' is the Heliocentric Longitude of Saturn, reckoned on the plane of the Rings, from the ascending Node of the Ring on the Ecliptic.

ω is the angular distance in the plane of the Rings from their ascending Node on the Earth's Equator to their Ascending Node on the Ecliptic.

The factor to be multiplied by a and b to obtain the axes of—

The inner ellipse of the outer ring = 0.8801	log factor = 9.9445.
The outer ellipse of the inner ring = 0.8599	log factor = 9.9344.
The inner ellipse of the inner ring = 0.6650	log factor = 9.8228.
The inner ellipse of the dusky ring = 0.5486	log factor = 9.7392.

Phenomena. (Pages 555 and 556.)

The conjunction of planet with planet is given only when the difference of declination does not exceed 3° ; that of planet with star when the difference does not exceed $10'$.

In computing the time of greatest brilliancy of Venus it is assumed that the brilliancy varies as $\frac{(r+\Delta+R)(r+\Delta-R)}{r^3\Delta^3}$, where r and R are the radii vectores of Venus and of the Earth respectively, and Δ is the distance of Venus from the Earth.

Physical Ephemeris of the Sun. (Page 557.)

P is the position-angle of the Sun's axis, B_0 the heliographical latitude of the Earth and L_0 the heliographical longitude of the centre of the disc.

Moon's Equator, Orbit, and Mean Longitude. (Page 558.)

The Moon's Equator descends upon the ecliptic at a constant angle at the point where the Moon's Orbit ascends upon the ecliptic.

Ω is the longitude of this point.

Ω' is the right ascension of the Ascending Node of the Moon's Equator upon the Earth's Equator.

i is the inclination of the two equators.

$\Delta + 180^\circ$ is the distance from the Ascending Node of the Moon's Equator upon the Earth's Equator to the Ascending Node of the Moon's Orbit upon the ecliptic.

The mean longitude of the Moon's Perigee Γ' and the Moon's mean longitude are given in a slightly different manner upon page 1.

Physical Ephemeris of the Moon. (Pages 559 to 565.)

"Derivation," No. 54, may be consulted.

C is the position-angle of the northern extremity of the Moon's axis.

Physical Ephemerides of Mercury and Venus. (Pages 566 and 567.)

k the fraction of the whole disc illuminated.

i the angle between Earth and Sun as seen from the planet.

θ the position-angle of the line of cusps.

L the brilliancy of the disc.

Physical Ephemeris of Mars. (Pages 568 to 575.)

P is the position-angle of the axis of rotation, $A\oplus$, $A\odot$, the planetocentric Right Ascension of the Earth and Sun respectively, reckoned in the plane of the planet's Equator from the vernal Equinox of the planet's Northern Hemisphere,

$D\oplus$, $D\odot$ are the planetocentric declinations of the Earth and Sun,

$\odot \delta$ the planetocentric longitude of the Sun in the plane of the planet's orbit,

k the fraction of the whole disc illuminated,

i the angular distance of Earth and Sun as seen from the planet,

q , Q the amount and position-angle of the greatest defect of illumination.

Physical Ephemeris of Jupiter. (Pages 576 to 581.)

The correction for phase is applicable to the central meridian.

Days elapsed of the Julian Period at Mean Noon. (Page 588.)

The Julian Period is a period of 7980 years, the year A.D. 1 corresponding to the year 4714 of the period, or the year 0 (B.C. 1) to the year 4713 of the period. The year 1924, therefore, corresponds to the year 6637 of the Julian Period.

As the year 0 corresponds to the year 4713 of the period, *at the commencement* of the year 0, there have elapsed 4712 years, or 1,721,058 days of the period. It is on this basis that the Table has been calculated. The Table gives the number of days of the period elapsed at the commencement of each fourth year of our era, from the year 0 to the year 1996. In the construction of the Table it has been assumed that the Gregorian reformation of the Calendar was introduced in the year 1582.

Geocentric Co-ordinates. (Page 589.)

This page contains a Table for computing the geocentric latitude and log. radius of a place on the Earth's surface, the geographical latitude of which is known. The

Table is adapted to a compression of $\frac{1}{297.0}$.

Observatories. (Pages 590 to 597.)

These pages contain a list of the *Longitudes and Latitudes of the principal Public and Private Observatories*, together with the Reduction of the Geographical to the Geocentric Latitude and the logarithm of the Earth's Radius for sea level for the position of each Observatory, computed with an assumed compression of one part in 297.0.

Standard Times. (Page 598.)

A list of Standard Times in use at various places is given.

ADMIRALTY CHARTS AND SAILING DIRECTIONS.

THE Official catalogue of charts published by the Admiralty, issued annually in March, can be obtained free of charge on application to the Admiralty agent for the sale of these Works, J. D. Potter, 145, Minories, London, E. 1.

Following the publication of the catalogue, a weekly list is printed of additional charts and sailing directions issued from the Hydrographic Department. These weekly lists can also be obtained free of charge from J. D. Potter.

The above catalogue and lists can be had from any of the sub-agents in the Home and Foreign Ports, whose names are printed below.

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